

# Indiana University of Pennsylvania

## 2011-2012 Undergraduate Catalog

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Online version: [www.iup.edu/registrar/catalog](http://www.iup.edu/registrar/catalog)

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# Undergraduate Degrees Offered at IUP

## Bachelor of Arts

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- **Anthropology** (Tracks available: Applied Anthropology, Archaeology, General Anthropology, Honors)
- **Art/History Track**
- **Art/Studio**
- **Asian Studies**
- **Biology** (Pre-Medicine concentration and Honors Track available)
- **Chemistry** (Pre-Medicine concentration available)
- **Computer Science**
- **Criminology** (Pre-Law Track available)
- **Economics** (Tracks available: Honors and Pre-Law)
- **English** (Tracks available: Film Studies; Language Studies; Literary, Textual, and Cultural Studies; Writing Studies; Honors; Pre-Law)
- **Geography** (Tracks available: Economic Geographer, Environmental Geographer, General Geography, GIS and Cartographer, Honors)
- **History** (Tracks available: Honors and Pre-Law)
- **Interdisciplinary Fine Arts/Dance Arts Track**
- **Interdisciplinary Fine Arts/Musical Theater Track**
- **International Studies/Political Science**
- **Journalism**
- **Music** (Tracks available: General Studies, Composition)
- **Philosophy** (Tracks available: Honors and Pre-Law)
- **Political Science** (Pre-Law Track available)
- **Psychology** (Honors Track available)
- **Religious Studies** (Honors Track available)
- **Sociology** (Tracks available: Applied Social Research, General Sociology, Human Services, Sociology of Disability Services, Honors)
- **Spanish** (Honors Track available)
- **Spanish for International Trade**
- **Theater**

## Bachelor of Science in Education

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- **Art Education**
- **Biology Education** (Honors Track available)
- **Business Education**
- **Chemistry Education**
- **Deaf Education**
- **Early Childhood Education/Special Education**
- **Earth and Space Science Education**
- **English Education**
- **Family and Consumer Sciences Education K-12**
- **Health and Physical Education**
- **Mathematics Education**
- **Middle-Level Education 4-8/Mathematics Specialization**
- **Middle-Level Education with English/Language Arts Specialization**
- **Music Education**
- **Physics Education**
- **Spanish Education K-12**
- **Social Science Education** (Concentrations available: Anthropology, Sociology)
- **Social Studies Education** (Tracks available: Economics, Geography, History)
- **Speech-Language Pathology and Audiology**
- **Vocational-Technical Education**

## Bachelor of Science

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- **Accounting**
- **Applied Physics** (Tracks available: Electro-Optics, Nanomanufacturing Technology)
- **Athletic Training**
- **Biochemistry**
- **Biology** (Concentration available: Family Medicine; Tracks available: Cell and Molecular Biology; Ecology, Conservation, and Environmental Biology; Environmental Health; Pre-Medical; Pre-Veterinary; Honors)
- **Business Technology Support**
- **Chemistry** (Pre-Medicine Concentration and Pre-Medical Track available)
- **Child Development and Family Relations**
- **Clinical Laboratory Science**
- **Communications Media**
- **Computer Science** (Tracks available: Applied Computer Science, Information Assurance, Languages and Systems)
- **Disability Services**
- **Fashion Merchandising**
- **Finance**
- **General Studies**
- **Geology** (Tracks available: Geology, Energy Resources, Environmental)
- **Hospitality Management**
- **Human Resource Management**
- **Interior Design**
- **International Business**
- **Management** (Tracks available: General Management, Entrepreneurship and Small Business Management, Operations Management)
- **Management Information Systems**
- **Marketing**
- **Mathematics** (Applied Mathematics Track available)
- **Natural Science** (Tracks available: Pre-Chiropractic, Pre-Dentistry, Pre-Engineering, Pre-Optometry, Pre-Pharmacy, Pre-Physical Therapy, Pre-Podiatry, Science for Disaster Response)
- **Nuclear Medicine Technology**
- **Nursing** (Tracks available: Licensed Practical Nurse, Registered Nurse)
- **Nutrition** (Tracks available: Culinary Dietetics, Dietetics, Nutrition)
- **Physical Education and Sport** (Programs available: Aquatics, Exercise Science, Sport Administration)
- **Physics**
- **Regional Planning** (Tracks available: Environmental Planner, Land Use Planning and GIS, Honors)
- **Respiratory Care** (Certified Respiratory Therapist track available)
- **Safety Sciences**

## Bachelor of Fine Arts

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- **Music Performance**
- **Art Studio**

## Associate of Arts

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- **General Studies**

## Associate in Science

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- **Electro-Optics**

## President's Message

*If you're a student using the print version of the Undergraduate Catalog, the book you hold is quite valuable. Unlike most of the university's publications, though, it is fairly plain, with few glossy photographs or colorful highlights.*

*Despite its plainness, the catalog contains the essence of the university in its descriptions of courses and its directory of the faculty members who teach them. The quality of the courses and the faculty is attested to by the list of accreditations that appears on page 6. If colorful highlights were available, this is the text that should have them—it's that important.*

*IUP's accreditation by the Middle States Commission on Higher Education means that the university as a whole has met very exacting standards. What's more, the university must participate in periodic, ongoing reviews in order to maintain the affirmation it has received in the form of accreditation.*

*More than a score of IUP's individual academic programs are also accredited by leading organizations in various fields. These include, for example, programs in the Eberly College of Business and Information Technology, which are accredited by the Association to Advance Collegiate Schools of Business. Programs in the IUP College of Education and Educational Technology are accredited by the National Council for the Accreditation of Teacher Education. Within the past few years, certain programs in the Department of Nursing and Allied Health Professions received approval for unconditional ten-year accreditation by the Commission on Collegiate Nursing Education. Like Middle States, a rigorous schedule of recurring reviews is part of the accreditation process for individual academic areas.*

*Not only does the process certify the quality of instruction at a university, but accreditation is a stamp of quality recognized by others. It speaks for itself. The graduate of an accredited institution is regarded as having achieved a certain level of knowledge and competence.*

*Since its founding as a normal school more than 136 years ago, IUP has taken pride in the quality of its faculty and its courses. That pride is reflected and validated in the accreditations the university has earned and will continue to earn, as its well-deserved reputation for academic quality endures.*

David J. Werner  
*Interim President*



# University Calendar

For the latest academic calendar information, please visit the website [www.iup.edu/academiccalendar](http://www.iup.edu/academiccalendar).

## Fall Semester 2011

Classes begin	August 29
Labor Day break (no classes)	September 5
Thanksgiving recess	November 21-27
Classes resume (8:00 a.m.)	November 28
Classes end	December 12
Final exams	December 13-16
Commencement	December 17

## Winter Session 2011-2012

Classes begin	December 19
Classes end	January 6

## Spring Semester 2012

Classes begin	January 23
Spring recess	March 12-18
Classes resume (8:00 a.m.)	March 19
Classes end	May 4
Final exams	May 7-10
Commencement	May 12

## Summer Sessions 2012

Early Summer Session	May 14
Summer Session 1	June 4
Summer Session 2	July 9

### Chancellor Pennsylvania State System of Higher Education

**John C. Cavanaugh**

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### President's Cabinet Indiana University of Pennsylvania

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**Rhonda H. Luckey**, Vice President for Student Affairs  
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**Barbara J. Moore**, Director, Institutional Research, Planning, and Assessment  
**Timothy P. Mack**, Dean, School of Graduate Studies and Research

# The University

## A University Education

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Through undergraduate and graduate programs, IUP serves students from across the nation and around the world by introducing them to and sustaining them in a culture of high aspiration and achievement so they may lead productive and meaningful lives. Singly and through collaboration within the Pennsylvania State System of Higher Education, with other educational institutions, and with business, government, human services, and professional organizations, IUP contributes to the economic and cultural strength of the region, the commonwealth, and the nation through education, scholarship, and service.

### IUP's Vision

IUP shall be among the nation's leading universities, recognized for student success and educational attainment, research, cultural enrichment, and economic development.

### Mission Statement

IUP is a leading public, doctoral/research university, strongly committed to undergraduate and graduate instruction, scholarship, and public service.

IUP engages students as learners and leaders in an intellectually challenging, culturally enriched, and contemporarily diverse environment.

Inspired by a dedicated faculty and staff, students become productive national and world citizens who exceed expectations personally and professionally.

For more information about IUP's core values and strategic goals, visit the website [www.iup.edu/strategicplan](http://www.iup.edu/strategicplan).

## History of the University

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IUP has witnessed a history rich in accomplishment. Since 1875, when it served only 225 students in a single building, it has experienced continuous growth, becoming Pennsylvania's fifth largest university. The current enrollment is fifteen thousand, with students from forty-eight states and over seventy countries.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was opened for students on May 17, 1875.

In April 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1959, the legislature approved a change of name to Indiana State College; in the 1960s there followed a rapid growth in the liberal arts program. In December 1965, Indiana was redesignated Indiana University of Pennsylvania and given the authority to expand its curriculum and to grant degrees at the master's level. At this time the first doctoral program was initiated.

Current academic offerings include more than 130 undergraduate majors with a variety of internship and study abroad programs, more than fifty master's degree programs, and ten doctoral degrees. Unusual opportunities for research at all levels and the Robert E. Cook Honors College provide special challenges for academic growth. The variety and quality of instruction are characteristic of a big university, yet at IUP, close, one-to-one relationships develop within the teaching framework, and a strong sense of community prevails.

### Points of Pride

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There are many good reasons why IUP is consistently ranked among the best institutions in the region by a wide variety of sources, including the Princeton Review's *Best Colleges* publications; Donald Asher's *Cool Colleges: For the Hyper-Intelligent, Self-Directed, Late Blooming and Just Plain Different*; Kiplinger's *Personal Finance Magazine*; Arco's *Dollarwise Guide to American Colleges*; Barron's *Best Buys in College Education*; *The New York Times*; *Money* magazine; and *U.S. News and World Report*. Here are some of those reasons:

- **Breadth of high-quality programs:** Undergraduates can choose from more than 130 majors. IUP also offers more than sixty graduate programs, including ten doctoral programs. Students can challenge themselves with honors programs in almost every major or attend the nationally renowned Robert E. Cook Honors College.
- **Strong graduate programs:** Graduate students at IUP gain the advantages of a nationally recognized university known for its commitment to high-quality research. They work with distinguished faculty members who regularly secure prestigious research grants and make noteworthy contributions to their discipline's body of knowledge.
- **Faculty:** IUP students enjoy a 18-to-1 student/faculty ratio. Nearly all classes are taught by fully qualified faculty scholars. Some faculty members have won Fulbright Teacher Exchange awards to study and research in other countries. Faculty research wins sponsorship by major institutions such as the National Science Foundation, NASA, the Centers for Disease Control and Prevention, and the U.S. Department of Education.
- **Campus and location:** The main IUP campus is in the heart of Indiana County, close to recreation of all kinds and only an hour away from Pittsburgh. IUP's location puts students in a safe, friendly, small-town environment within easy reach of all the opportunities a big city has to offer.
- **Hands-on learning:** An IUP education is rigorous and research based. Every IUP program endeavors to prepare students for the real-world challenges they will face after graduation. Students engage in applied learning through laboratory work, internships, and exchange programs.
- **Transfer-friendly:** Students who want to transfer to IUP from another academic institution will find an admissions staff dedicated to their success.
- **Distance learning:** Undergraduate and graduate courses are available to students who may have work or family schedules that conflict with on-campus classes.
- **A diverse, vibrant, welcoming community:** IUP attracts and sponsors a wide variety of local, national, and international cultural events that make both the campus and the surrounding town a vibrant place for the arts as well as for intellectual pursuits. In addition, more than 220 student clubs and organizations thrive on campus, ensuring that the IUP experience is as much about shared activities and memories outside the classroom as it is about collaboration and dialogue within.
- **Division II athletics:** IUP competes in the Pennsylvania State Athletic Conference and is an NCAA Division II member. The university sponsors eight varsity sports for men and eleven for women, with scholarships available for all of them. IUP students also get involved in a variety of club and intramural sports.
- **Excellent value:** All of the above add up to one thing: value. That's why IUP is nationally recognized for offering an education of real value. In addition to keeping tuition costs competitive, IUP disburses substantial financial aid in the form of scholarships, grants, work-study programs, and low-interest loans. In fact, nearly 90 percent of IUP students receive financial assistance in one form or another.

## University Governance

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Indiana University of Pennsylvania is one of fourteen members of the State System of Higher Education in Pennsylvania. Oversight of the System is vested in the Board of Governors, the members of which are appointed by the governor. Each university has its own Council of Trustees, responsible for financial oversight and insuring compliance of university policies with state law. Responsibility for the day-to-day operations is entrusted to the university president, who is the chief executive officer.

Due to the complexity of the university, the president relies on the University Senate to develop and approve curricula and to advise the president on setting policies that affect and shape the working and learning environment at IUP. The University Senate is composed of faculty, students, and administrators who are both elected and appointed by their peers.

Many of the important policies governing the working and learning environment, such as the policy on sexual harassment, the academic integrity

policy, and the policy on nondiscrimination, are given in this catalog or the student handbook (*The Source*) and are also available on the World Wide Web at [www.iup.edu](http://www.iup.edu). To insure a nurturing environment where all faculty, students, and administrators can work together in harmony, it is essential that all members of the university be familiar with these policies, as they set the expectations for civil behavior and academic conduct.

## Accreditation

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IUP is a state-owned institution for higher education and a member of the Pennsylvania State System of Higher Education. It holds universitywide regional accreditation through the

Middle States Commission on Higher Education  
3624 Market Street, Philadelphia, PA 19104  
Telephone: 267-284-5000  
Website: [www.msche.org](http://www.msche.org)

In addition, undergraduate programs at IUP have earned specialized accreditation from the following organizations:

- Accreditation Commission for Programs in Hospitality Administration
- Accrediting Board for Engineering and Technology
- American Association for Health Education
- American Culinary Federation
- American Dietetic Association
- American Psychological Association
- American Speech-Language-Hearing Association
- Association to Advance Collegiate Schools of Business
- Commission on Accreditation for Dietetic Education
- Commission on Accreditation for Respiratory Care
- Commission on Accreditation of Athletic Training Education
- Commission on Collegiate Nursing Education
- Council for Exceptional Children
- National Association for School Psychologists
- National Association for Sport and Physical Education
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of Schools of Theatre
- National Council for the Accreditation of Teacher Education
- National Environmental Health Science and Protection Accreditation Council

See the website [www.iup.edu/academicaffairs/resources](http://www.iup.edu/academicaffairs/resources) for the most current listing.

## Indiana, the County and the Town

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Indiana County was formed by act of the state legislature in 1803 and was fully organized in 1806. George Clymer of Philadelphia, a signer of the Declaration of Independence, owned more than three thousand acres in the area and presented 250 acres to the new county for a county seat. The town of Indiana was officially founded in 1816.

The county's first major industry was the manufacture of salt, which began in 1813 about two miles above the town of Saltsburg. As early as 1797 bituminous coal was dug from exposed outcroppings. Mining soon rivaled agriculture as the backbone of the county's economy. Its influence gradually diminished, though, and today IUP is the county's largest employer. Indiana County now thrives with an economic base combining education, agriculture, energy production, and commerce into an outstanding quality of life for its nearly 90,000 residents.

Indiana has become known as the birthplace of film star Jimmy Stewart and as the Christmas Tree Capital of the World. Visitors and locals alike can relive Indiana County's past by visiting its parks, covered bridges, fairs, and even the largest Amish settlement in Western Pennsylvania. As one of nine counties represented in America's Industrial Heritage Project, Indiana County has a number of historical sites that are part of the project's Path of Progress. The project's archives are housed in the Special Collections section of IUP's Stapleton Library.

## Alumni

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With an alumni base that comprises more than 125,000 individuals, the university has come to rely on the support of its alumni in a variety of areas. These include career networking, student recruitment, and government relations, as well as fundraising and service on the Council of Trustees, Alumni Association Board of Directors, Foundation for IUP Board of Directors, and a number of advisory committees.

Graduates automatically become members of the Alumni Association. They are encouraged to continue their connection with IUP through the Alumni Association and online services at [www.iup.edu/alumni](http://www.iup.edu/alumni) and through periodicals like *IUP Magazine*.

## Buildings and Grounds

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In 1875, the main campus consisted of 12 acres and one building, John Sutton Hall. With the addition in 1995 of 137 acres of undeveloped land, the main campus now comprises 374 acres and fifty-nine major buildings. Two of the buildings, Breezedale and John Sutton Hall, have been entered in the Register of Historic Places.

In 2011, IUP completed a \$244 million project to enhance the campus; living-learning environment. In addition, the Kovalchick Convention and Athletic Complex opened in March 2011.

IUP also owns and operates residential, educational facilities at the Punxsutawney Regional Campus in Jefferson County where approximately eight acres provide the real estate for the IUP Living and Learning Center and the Academy of Culinary Arts program.

The Indiana University of Pennsylvania Northpointe Regional Campus in Armstrong County provides facilities for specialized electro-optics training along with various other undergraduate and graduate-level courses. Northpointe is a commuter-only campus.

The IUP Monroeville Graduate and Professional Center is a graduate education center located in Wilkins Township, Pennsylvania, and provides various graduate-level programs for traditional and nontraditional students.

## Resources

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### Computing Services

All students have access to an extensive set of web-based services, including class registration, schedule planning, and records management. Students are provided with computing accounts for e-mail and network access. These computing accounts provide personal disk space for e-mail, projects, and web pages. More information about technology resources available to IUP students can be found at [www.iup.edu/itsupportcenter/student/](http://www.iup.edu/itsupportcenter/student/). Technical support is available at the IT Support Center via website [www.iup.edu/ITSupportCenter](http://www.iup.edu/ITSupportCenter), via e-mail to [it-support-center@iup.edu](mailto:it-support-center@iup.edu) or emergency issues via telephone at 724-357-4000.

The IT Support Center coordinates the operation of several fully equipped and Internet-connected University Public Computer Labs. These computer labs are available for student use and contain a wide variety of software. Some computer labs contain specialized software related to the college or department hosting the lab. Several departments maintain computing facilities that are of a focused nature which are intended to support specific programs. More information on the public computer labs can be found at [www.iup.edu/itsupportcenter/labs](http://www.iup.edu/itsupportcenter/labs).

Each college has a College Technology Manager (CTM) to support technology within the college (for faculty, academic support staff and Faculty/Student research).

Connectivity for student computers (wired) in the residence halls is provided through the Office of Housing and Residence Life. In addition, wireless connectivity is prominent at IUP. The IUP Wireless Network is available in all classroom buildings, all suite-style residence halls, Stapleton Library, the Hadley Union Building, and the Oak Grove.

IT Services' enduring mission is to provide a modern, mainstream IT environment to the university community in a manner that is both flexible

and versatile while delivering services in a timely, yet cost-effective manner. Guidance in this area is provided by each university division vice president, the Academic Computing and Policy Advisory Committee (ACPAC), and the Technology Operation Team (TOT).

### **The IUP Libraries**

Patrick J. Stapleton Jr., Library, the central library for IUP, was completed and dedicated in 1981. It adjoins Rhodes R. Stabley Library, which results in a combined structure of 156,000 square feet. The Orendorff Music Library which is located in Cogswell Hall, and the regional campus libraries in Northpointe and Punxsutawney are the other components of the IUP Library system. Sixteen library faculty members, eighteen support staff members, and over 150 students are employed in the Libraries division of the university.

The book collection contains 885,960 volumes; there are 1,285 periodical paper or microform subscriptions and 23,127 electronic subscriptions. There are over 2.4 million items of microforms, over 143,005 bound periodicals, and over 37,105 volumes of governmental publications (IUP is a designated Select Depository for federal and state publications). The libraries' media holdings in all formats are extensive. Resources are supplemented through membership in OCLC for interlibrary loan, the Health Sciences Consortium (North Carolina), and the Laurel Highlands Consortium. The IUP Libraries are active members of the State System's Keystone Library Network, and through the KLN, the university has a shared online catalog and receives many electronic databases. The Libraries are also charter members of the Pennsylvania Academic Library Consortium Initiative and receive direct loans from the state's major university and college libraries.

The central library is open 103 hours a week during regular terms. The Orendorff Music Library, located in Cogswell Hall, contains approximately 11,000 books, 22,000 scores, 10,000 recordings, and 3,000 CDs. Sound recordings circulate only to faculty members, but listening stations are available for use by all patrons.

The Northpointe Regional Campus Library has more than 5,000 volumes, and the Punxsutawney Campus Library has over 8,300 volumes and recordings of music, poetry and drama.

### **IUP Centers and Institutes**

The School of Graduate Studies and Research provides coordinating and support functions for campus-based centers and institutes through the Office of the Assistant Dean for Research. Centers and institutes serve a variety of functions. Each center or institute is unique in its focus and is created to meet a specifically identified need. Centers and institutes provide an opportunity for faculty members to utilize their expertise through consultation, technical assistance, and research-related activities. Centers and institutes provide excellent opportunities for students to learn, to demonstrate their knowledge and skills, and to become involved in meaningful projects in the community. Centers and institutes strengthen the research and public service missions of the university and, therefore, enhance the quality of education.

A current listing of centers and institutes at IUP follows.

- Administration and Leadership Studies Research and Training Center
- American Language Institute
- Applied Research Lab
- Archaeological Services
- Biotechnology Research Institute
- Center for Applied Psychology
- Center for Career and Technical Personnel Preparation
- Center for Counselor Training and Services
- Center for Digital Humanities and Culture
- Center for E-Commerce and Technology Support
- Center for Educational and Program Evaluation
- Center for Family Business
- Center for Film Studies
- Center for Health Promotion and Cardiac Disease Prevention
- Center for Middle Eastern Studies
- Center for Music Teaching and Learning

- Center for Northern Appalachian Studies
- Center for Research in Criminology
- Center for Rural Gifted Education
- Center for Statistics Education in Pennsylvania at IUP
- Center for Teaching Excellence
- Center for Turning and Furniture Design
- Center for Videoconferencing
- Child Study Center
- Criminal Justice Training Center
- Digital Media Institute
- Excellence in Entrepreneurial Leadership Center
- First Commonwealth Center for Economic Education
- Frederick Douglass Institute
- Government Contracting Assistance Program
- Highway Safety Center
- Institute for Information Assurance
- Institute for Mine Mapping, Archival Procedures, and Safety
- Intercollegiate Athletic Institute for Sports Camps
- John P. Murtha Institute for Homeland Security
- Literacy Center
- Management Services Group
- Mid-Atlantic Addiction Research and Training Institute
- National Emergency and Disaster Information Center
- Pennsylvania/OSHA Consultation Program
- Small Business Development Center
- Small Business Incubator
- Small Business Institute
- Software Development Center
- Speech, Language, and Hearing Clinic

### **University Organization**

The university's administration comprises four divisions: Academic Affairs, Administration and Finance, University Relations, and Student Affairs. Information about Academic Affairs and Student Affairs appears in this catalog's sections called, respectively, Academic Affairs Division Areas and Student Programs and Services. Information about the other two divisions follows.

#### **Administration and Finance Division**

The Division of Administration and Finance provides internal and external constituents of the university with the highest-quality services in the most supportive and cost-effective manner. In contributing toward the fulfillment of IUP's mission of teaching, research, and public service, the Administration and Finance Division is responsible for the development, stewardship, enhancement, integrity, and stability of the university's fiscal, human, and physical resources.

Major responsibilities of the division are organized and operated from the departments of Facilities Management, Finance, Human Resources, Administration, Budget, Procurement Services and Central Stores, Public Safety and University Police, and Special Assistant to the Vice President for Special Projects.

#### **University Relations Division**

The advancement arm of the university, the University Relations Division brings together several functional areas. The marketing and communications, governmental relations, alumni relations, arts and entertainment, and fundraising areas stimulate positive regard for the university and acquire new resources. The departments feature the excellence and achievement of faculty, students, staff, and alumni and engage people in the life of the university. Staff members and volunteers raise private resources that can influence the quality of the academic environment, athletics, and of student and alumni life.

The Foundation for IUP is the nonprofit, charitable vehicle steered by a distinguished Board of Directors through which the charitable dollars raised by volunteers and staff members are used by the university to improve the educational and learning environment, along with athletics.

# The Regional Campuses

**Richard J. Muth, Interim Director, Northpointe Regional Campus**

**Kristen A. O'Hara, Interim Assistant Director, Northpointe Regional Campus**

**Terry Appolonia, Dean, Punxsutawney Regional Campus**

IUP operates two regional campuses, one in Punxsutawney, twenty-eight miles north of the Indiana campus, and one at Northpointe in Freeport, thirty-eight miles west of the Indiana campus. The first regional campus was established in 1962 in Punxsutawney. The following year, the Armstrong campus in Kittanning was opened. In the summer of 2005, the Armstrong Campus relocated to a new facility in Freeport and became the Northpointe Regional Campus. The Punxsutawney Regional Campus accommodates three hundred students, and the Northpointe Regional Campus accommodates three hundred to up to three hundred fifty students.

Control of the regional campuses is directly vested with the IUP administration and Council of Trustees. Both regional campuses carry full accreditation as integral parts of the undergraduate and graduate programs of IUP.

## Programs of Study

The regional campuses of IUP offer basic Liberal Studies courses for most majors in the various undergraduate colleges of the university. Students may schedule a full program for the freshman year and some sophomore-level courses. No student accepted at either of the regional campuses is eligible to attend the Indiana campus until he/she has completed two semesters, has attained at least a 2.0 GPA, and earned at least 21 undergraduate credits.

Faculty advisors and administrators at the regional campuses are available to advise students on their instructional programs and the proper time for continuing at the Indiana campus.

## Admission

Any prospective student who wishes to attend either of the regional campuses instead of the Indiana campus may apply for admission by requesting an application from the Admissions Office or from the administration of either regional campus.

## Fees

With the exception of the health fee, Punxsutawney Regional Campus students pay the same basic fees as Indiana campus students. Northpointe Regional Campus commuter students are not required to pay the activity fee and health services fee. Please see the Finances section of this catalog for further information.

## Rules and Regulations Concerning Student Behavior

Students at the regional campuses are subject to the same rules and regulations as students on the Indiana campus.

### Northpointe Regional Campus

The Northpointe Regional Campus is a commuter campus located at Exit 18 off Route 28 with the primary mission of providing local access to higher educational opportunities which will foster economic and professional growth for the region. Both credit and noncredit programs are offered at the Northpointe Campus, with special emphasis on associate degrees, graduate degrees, certificates, and liberal studies courses for the first-year experience for commuter students.

Special degrees, such as the Associate in Science in Electro-Optics, are offered only at the Northpointe Campus. Graduate degree programs can be completed entirely at the Northpointe Campus. Undergraduate prospective students who wish to attend the Northpointe Regional Campus may apply for admission by requesting an application from the Admissions Office, while prospective graduate students who wish to attend the Northpointe Campus may apply for admission by requesting an application from the School of Graduate Studies and Research.

In addition, requests for applications may be made to the Administrative Office of the campus. The address follows:

IUP Northpointe Regional Campus  
167 Northpointe Boulevard  
Freeport, PA 16229  
Telephone: 724-294-3300  
Toll-Free: 800-889-0872  
Fax: 724-294-3310  
E-Mail: [northpointe-campus@iup.edu](mailto:northpointe-campus@iup.edu)  
Website: [www.iup.edu/northpointe](http://www.iup.edu/northpointe)

### Punxsutawney Regional Campus

The Punxsutawney Regional Campus offers a first-year experience where students have the opportunity to begin their university studies in a small, personalized setting. The students are provided with a range of first-year, Liberal Studies classes that are designed to meet the needs of the entering student regardless of academic major. The smaller environment allows students to interact with faculty, staff, and other students in an environment that fosters individual growth and achievement. Students from across the Commonwealth of Pennsylvania as well as other states attend the Punxsutawney Campus, sharing in a diverse living-learning experience.

The Punxsutawney Regional Campus has a living-center for those students who prefer a residential college experience. Students are free to choose their own housing from all available sources, including the living-center and private homes or apartments within the community. A list of off-campus housing options can be obtained at [www.iup.edu/punxsutawney](http://www.iup.edu/punxsutawney) (for prospective students).

The campus has its own dining facility where meals are served seven days a week when the university is in session. Living-center students, as well as students living within the community, are encouraged to participate in the dining hall program. The same food service contractors serving the Indiana campus operate the Punxsutawney dining program.

To receive an application, or to request additional information on the Punxsutawney Regional Campus, please contact:

Punxsutawney Regional Campus  
IUP  
1012 Winslow Street  
Punxsutawney, PA 15767  
Telephone: 814-938-6711  
Website: [www.iup.edu/punxsutawney](http://www.iup.edu/punxsutawney)



# Admissions and Registration

## Undergraduate Admissions Policy

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Graduates of an accredited four-year high school or holders of a GED equivalency diploma are qualified to apply for admission to IUP. Students who have completed the junior year of high school may file an application any time after August 1.

Requests for applications should be addressed to

Office of Admissions  
Indiana University of Pennsylvania  
Sutton Hall, Suite 117  
1011 South Drive  
Indiana, PA 15705  
1-800-442-6830 or 724-357-2230

An online application for admission is available at [www.iup.edu/admissions/undergraduate](http://www.iup.edu/admissions/undergraduate).

The Admissions Committee, giving equal opportunity to all students, will take the following criteria into consideration when reviewing each application: grades and courses taken, class rank, SAT or ACT scores, high school counselor recommendations, extracurricular activities, and other pertinent information that would be helpful to the Admissions Committee in making decisions. SAT or ACT scores are not required for transfer applicants, veterans, or applicants who have graduated from high school more than two years before applying. However, transcripts from high school and all colleges previously attended are required of all applicants.

Although the university does not require a specific number of high school credits in particular subject areas, applicants are strongly urged to take the usual college preparatory program in high school. Applicants should also take any available high school courses in the field of their intended major. Certain majors at IUP require completion of a foreign language at the intermediate level in order to earn a bachelor's degree. The Admissions Committee does not require an applicant to take a foreign language in high school for admission to these majors; however, it is in the student's best interest to do so.

Applications are considered by the Admissions Committee on a rolling basis. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives, with a May 1 deadline for nonrefundable tuition deposits.

Academically qualified applicants to the departments of Art, Music, and Theater will be admitted to the university by the Admissions Committee. However, admission to the requested major will be subject to the acceptance by the Department of Art after a portfolio review and by the departments of Music and Theater after an audition. Students will receive information from the Art, Music, and Theater departments concerning auditions and portfolio reviews once they have been accepted to IUP.

## Freshman Applications

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All persons expecting to apply for freshman admission to IUP should plan to take the SAT or ACT test during their junior and/or early part of their senior year. The Admissions Committee recommends that students take the tests more than once. The committee considers the highest scores from all tests taken.

Arrangements to take the SAT or ACT tests can be made through the high school counselor, by writing to the College Entrance Examination Board, Box 592, Princeton, NJ 08540 or American College Testing, P.O. Box 168, Iowa City, IA, 52243 for an information pamphlet and a test registration form, or on line at [www.collegeboard.com](http://www.collegeboard.com).

In order for the test scores to be received by IUP, the applicant should designate IUP on the test registration form (SAT code: 2652, ACT code: 3704) as one of the universities to receive the scores, or the applicant can request that his or her school counselor forward test scores to the Admissions Office.

The applicant should give the completed application form and the nonrefundable \$45 application fee payable to IUP to his/her high school counselor. The counselor should mail the application and complete packet of admissions materials to the IUP Office of Admissions, Sutton Hall, Suite 117, 1011 South Drive, Indiana, PA 15705.

## Transfer Admissions

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A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application with the nonrefundable \$45 application fee, official transcripts of all postsecondary educational work, and an official high school transcript.

All admissions decisions are made on a rolling basis by the Admissions Committee. Under a rolling admissions policy, applications are reviewed as they become complete. Decisions can range from automatic acceptance, to request for additional information, to other alternatives.

Transfer applications are reviewed on the basis of academic college coursework attempted or completed. This coursework should be nondevelopmental and nontechnical in nature and be taken from an institution which is accredited by one of the six regional accrediting agencies. Transfers are required to have at least a cumulative 2.0 GPA on a 4.0 scale (C average) from all schools previously attended and to have met the minimum requirements established by the academic department to which the student is applying. Teacher education and nursing programs require increased standards for admission and additional information (Praxis I scores for education). Contact the Office of Admissions for specifics. In addition, the admissions decision considers other evidence of students' performance and ability to be a successful college student.

The evaluation of credits from other institutions of higher education is the responsibility of the Office of Admissions and the academic college dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions which are accredited by the six regional accrediting agencies. Each course is evaluated separately. The evaluation includes a review of the description, credits, and grade of each course along with the applicability of the course to the student's major at IUP. However, only credits transfer, not grade-point average. It has been the policy of the university that only courses with a grade of C or higher will be accepted, except for two-year associate degree graduates of state-supported community colleges in Pennsylvania. No matter how many credits are transferable, the student must satisfy all of the degree requirements falling into the categories of (1) university requirements, (2) college requirements, and (3) department requirements.

**University Requirements:** Since all students are obliged to fulfill a basic program in Liberal Studies consisting of a minimum of 48 credits and there is a reasonable degree of flexibility in the Liberal Studies requirements, the transfer evaluator will look to this area first for applicable credits for transfer. Most introductory courses are generally equivalent.

## Placement Test Policy

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Entering students are required to complete placement tests prior to course registration. Based on their placement results, students may be required by departments to take one or more additional courses in preparation for their courses. These courses may be in addition to course prerequisites and the minimum requirements for the student's program of study. Students who believe their test scores do not accurately reflect their abilities should appeal their placement by contacting the Advising and Testing Center.

## Residency Requirements for Awarding of Degrees

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All students receiving an initial IUP baccalaureate degree are required to complete 45 credits in IUP courses. Students must complete at least 50 percent of required credits for an IUP major in IUP courses and a minimum of 6 credits in IUP courses for a minor. Normally, the student will complete the final 30 credits in IUP courses, unless specific approval has been secured from the dean of the student's college. IUP courses include all courses listed in the Undergraduate and Graduate catalogs.

It should also be noted that for community college graduates, a maximum of 60 credits is transferable to this institution for the purpose of fulfilling a specific program of study. Excess credits, if any, may be transferred but cannot be used for fulfilling the minimum requirements for the degree.

To remain in good academic standing, transfer students must meet the same GPA requirements as those specified for all other undergraduate students. See section in this catalog entitled "Criteria Governing Continuance at IUP."

The university accepts credits associated with "D" grades only when they are part of a completed associate degree earned at a publicly owned community college in Pennsylvania. These "D" grades will be treated in the same manner as those earned at IUP. This articulation policy was adopted by the Board of State College and University Directors in 1973.

### **Act 101 Program**

Students identified as eligible for Act 101 support may be admitted to the Act 101 Program through the Department of Developmental Studies in the College of Education and Educational Technology. Please see detailed information at the Department of Developmental Studies description in the College of Education and Educational Technology section of this catalog.

### **Part-Time Study (Nondegree)**

Part-time undergraduate study is available to any high school graduate or holder of a GED Equivalency Diploma. No SAT scores are required. Note: A TOEFL Score is required as part of the application for an individual whose native language is other than English. Those who are not U.S. citizens must submit a notarized copy of their current visa and I-94 card or alien resident card.

Applications are available from the Admissions Office and must be submitted with documentation directly to the Admissions Office by August 15 for the fall semester and December 15 for the spring semester. A \$45 application fee is required. Applications submitted after established dates are not guaranteed consideration.

Transfer students may also apply to the Admissions Office for part-time study and must submit official transcripts for all previous college work attempted. An overall 2.0 GPA is required.

A student in the Part-time Studies Program is limited to a semester enrollment of no more than 11 credits and must apply for degree candidacy for formal admission to a degree program before 30 IUP credits have been earned. Applications for degree candidacy must be filed by the midterm point of the fall or spring semester preceding candidacy. Specific requirements for GPA and IUP credit vary by degree program. The minimum credit criteria to apply for consideration for degree candidacy follow:

<b>High School Diploma or GED</b>	15 IUP credits	2.0 GPA
<b>Veteran</b> (DD-214 required)	9 IUP credits	2.0 GPA
<b>Transfer</b> (with 12 or more credits)	9 IUP credits	2.0 GPA
<b>Transfer</b> (with 11 or less credits)	15 IUP credits	2.0 GPA

### **Program for Visiting High School Students (Dual Enrollment)**

IUP permits the exceptional high school student to preview university life and earn regular college credit on a limited nondegree basis. Students should contact the Office of Distance Learning and Continuing Education to inquire about the Dual Enrollment Program.

### **Postbaccalaureate Studies (Undergraduate)**

The Postbaccalaureate Studies Program provides access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, an additional teacher certification, or personal enrichment. Students may enroll on a full- or part-time basis determined by personal preference and availability of coursework.

Applications are available from the Admissions Office. A completed application and official transcripts of all previous undergraduate coursework must be submitted for review by August 15 for fall semester and December 15 for spring semester. Applications not submitted by established dates are not guaranteed consideration. A \$45 application fee is required.

### **Second Baccalaureate Degree**

A student with an earned baccalaureate degree who wishes to complete the requirements for a second or subsequent bachelor's degree must make application and submit official transcripts indicating degree(s) awarded. The student must complete a minimum of thirty additional IUP credits beyond those earned in his/her initial bachelor's degree and meet the requirements for graduation established by the academic department and college in which the new degree is to be earned. However, a student may complete one or more secondary majors while earning the primary degree.

### **Postbaccalaureate Associate Degree**

A student with an earned baccalaureate degree who wishes to complete the requirements for an associate degree must apply through the Admissions Office and submit official transcripts indicating degree(s) awarded. The student must complete a minimum of 15 additional IUP credits and meet the requirements established by the academic department and college in which the new degree is to be earned. A student who holds a baccalaureate degree may not earn either an associate degree in the same discipline or in General Studies.

### **Teacher Certification**

A college graduate with an earned nonteaching baccalaureate degree who wishes to complete the requirements for Instructional Level I Certification must apply as a second bachelor's degree student. A minimum 3.0 cumulative GPA and successful Praxis I (PPST) scores are required for consideration for admission. Following admission to the program, applicants will be required to meet all requirements of the 3-Step Process for Teacher Education as they proceed. This document can be found in the College of Education and Educational Technology section of this catalog or at the website [www.iup.edu/education](http://www.iup.edu/education).

A Pennsylvania-certified teacher who wishes to add a new area of certification may apply to the Admissions Office for admission as a postbaccalaureate student.

### **Immunization Requirements**

Students are required to complete a Student Health Form documenting immunization status. See Health Services information in section "Student Programs and Services."

### **Readmission Policy for Students Who Withdraw from the University Voluntarily**

Undergraduate students who have withdrawn from the university, or were not enrolled during the previous regular semester, must complete an Application for Readmission, available through one of the following options:

- By logging on to URSA ([www.iup.edu/ursa](http://www.iup.edu/ursa)) and selecting the Apply for Readmission to IUP option under the Student Services section
- By downloading a form from the Registrar's Office website at [www.iup.edu/registrar/forms](http://www.iup.edu/registrar/forms)
- By going to the Office of the Registrar, Clark Hall Lobby
- By calling the Office of the Registrar at 724-357-2217.

The readmission deadline for the spring semester is December 1 and for the fall semester is July 20.

Requests for readmission for academically dismissed students or first-semester and transfer students who withdraw from the university voluntarily during their first semester of full-time enrollment will be forwarded to the Office of the Dean of the college in which the student was enrolled at the time of dismissal, or of total university withdrawal, for a decision on the student's readmission.

Decisions for readmission of students in university probationary or dismissed status, regardless of whether the student was dismissed by the university or the student voluntarily withdrew, are the responsibility of the Academic Standards Officer of the college the student wishes to enter. If the student is seeking admission to a new college, the officer of the new college will consult with the officer of the former college before making a decision. The Registrar's Office will officially change the major based on the officer's readmission letter to the student.

All outstanding financial obligations to the university must be met before the Application for Readmission will be processed. Due to enrollment restrictions, requests for readmission to Nursing or the College of Fine Arts will be forwarded for approval by a representative from that department or college.

*Readmitted students who have not been enrolled for two years or more may petition their college dean for application of the Cancelled Semester Policy, which provides for cancellation from the cumulative record of the effects of one semester below a GPA of 2.0. Students who have been separated from the university for three consecutive calendar years may petition their college dean to return under the Fresh Start Policy. Students must pay fees and attend classes before a designated semester will be cancelled or the Fresh Start Policy will take effect. See the Academic Policies section of this catalog for more information on these policies.*

Once the application for readmission has been approved, the student will be sent instructions on how and when to register.

Students readmitted to IUP are encouraged to complete the Free Application for Federal Student Aid (FAFSA) to determine financial aid eligibility. Financial aid eligibility will be based on financial need, as determined by the FAFSA, and on the student's prior academic record.

### **The Summer Sessions**

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The summer school program at IUP is designed to meet the needs of many students. Courses, workshops, and seminars are offered in the liberal arts, teacher education, and other fields of study.

Continuing university students, including newly admitted freshmen, who wish to accelerate their program of studies will find both Liberal Studies and special courses in all fields of study. Students from other colleges and universities may take courses at IUP; however, they are advised to first ensure that their home institution will transfer such credits earned at IUP.

Teachers-in-service will find courses in the summer program to serve a variety of needs. They may enroll to qualify for permanent certification, satisfy Act 48 requirements, take refresher courses in their field of specialization, or take courses for the purpose of extending their certification to a new field.

The summer sessions schedule can be viewed at the website [www.iup.edu/summer](http://www.iup.edu/summer). Contact the Office of the Registrar, Clark Hall (toll-free number: 888-800-3190), for more information on undergraduate courses. Contact the School of Graduate Studies and Research (724-357-2222) for more information on graduate courses.

Attendance at summer sessions undergraduate courses is open to all students but does not constitute admission or readmission for continuing registration in the fall and/or spring semesters. IUP students with less than a 2.0 cumulative GPA must receive approval from their dean's office before attending summer courses. Non-IUP students (graduate and undergraduate) can submit an electronic form that can be accessed at the website [www.iup.edu/summer](http://www.iup.edu/summer). Students who desire readmission for the fall semester should apply to the Registrar's Office by the preceding July 20 and by December 1 for the spring semester.

### **English Language Programs for International Students and Visitors**

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The American Language Institute (ALI) offers several noncredit, intensive English programs for international students and visitors from beginning through advanced levels each semester. The ALI Provisional (ALI-P) program is for applicants who want provisional admission to an IUP undergraduate program preceded by full-time English instruction.

The English for Academic Purposes Program (EAP) is for applicants seeking to prepare themselves for study at any U.S. college or university. Enrollment in fall and spring semester is for fourteen weeks (20 hours per week). Midsemester admission is possible with the approval of the director. In summer semester, programs are offered for ten weeks. Students are placed at beginner, intermediate, or advanced levels by proficiency tests at

the start of each program. An institutional TOEFL is administered at the conclusion of each semester.

Qualified students can take a Bridge Program (3-6 credits and ESL) through the ALI. Contact the director at 724-357-6944 or e-mail [ali-inquiries@iup.edu](mailto:ali-inquiries@iup.edu).

Cocurricular social and cultural programs are offered to all students. For further information, visit the website [www.ali.iup.edu](http://www.ali.iup.edu).

# Finances

## Institutional Fees\*

\*The university reserves the right to change its fees without notice. The tuition and fees set forth in this section were those in effect in May 2011. The fee schedule is subject to change; these figures are to be considered simply as an estimate. The most current fee schedule can be obtained by writing to the IUP Admissions Office, by phoning 724-357-2230, or by visiting the website [www.iup.edu/bursar](http://www.iup.edu/bursar).

### Tuition

Tuition covers the keeping of student records, use of the library, student welfare, and laboratory facilities. The tuition for full-time in-state students is \$2,902 per semester. An additional \$242 per credit will be charged for undergraduate credits scheduled in excess of 18. The tuition for part-time in-state undergraduate students is \$242 per credit. A part-time undergraduate student is one taking 11 or fewer credits. See the sections on Admissions and Registration and on Academic Policies for further information concerning part-time students.

Out-of-state full-time students pay tuition of \$7,255 per semester. An additional \$605 per credit will be charged for undergraduate credits in excess of 18. The tuition for part-time out-of-state students is \$605 per credit. The definition of an in-state student is based on domicile. An in-state student is one who has been domiciled in Pennsylvania for at least one year preceding attendance at any institution of higher education in the state of Pennsylvania. A minor is presumed to have the domicile of his/her parents or legal guardian. Students who have any questions concerning their domicile should read the official text of the rules, as published in Volume 22, Pennsylvania Code, Section 507.1 through 507.11.

### Dining Plan Fee

#### On-Campus Dining Plans: Indiana and Punxsutawney

Plan A/F	19 meals per week + \$150 in Flex money	\$1,273
Plan B/F	14 meals per week + \$200 in Flex money	\$1,261
Plan B	14 meals per week	\$1,061
Plan C/F	165 meals a semester + \$200 in Flex money	\$1,257
Plan D/F	10 meals a week + \$200 in Flex money	\$1,217
Plan K/F	125 meals a semester + \$200 in Flex money	\$1,211

#### Dining Plans: Off-Campus and Indiana Apartments

Plan E/F	75 meals a semester + \$150 in Flex money	\$766
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Meals provided through these plans are for the use of the contract holder only. Flex money can be carried from fall to spring semester; however, any portion not used by the end of the spring semester **will be forfeited**. Flex may be used for guests.

### Wellness Fees

All students enrolled on the Indiana campus pay a wellness fee. Students enrolled on other campuses are not assessed this fee. The services of the Center for Health and Well-Being are supported by student wellness fees. These services include the Health Service; the Counseling Center; Alcohol, Tobacco, and Other Drugs; Fitness and Recreation; Health AWAREness; Haven Project; and the Nutrition Connection programs.

**Wellness Fee (Previously Fee A)–\$160 per semester (Fall and Spring semesters):** This fee is paid by all full-time undergraduate students. Students who pay this fee have full access to all the services offered through the Center for Health and Well-Being. Students from other campuses may choose to pay this fee and receive care on the main campus.

**Community Wellness Fee (Previously Fee B)–\$40 per semester (Fall and Spring semesters):** This partial fee is mandatory for all part-time undergraduate and all graduate students. Students from other campuses may choose to pay this fee and receive care on the main campus. Students may opt to upgrade to the full Wellness fee from this fee at any time. Community Wellness Fee provides limited access to the services provided by the Center for Health and Well-Being.

Additional charges may be necessary depending on the service provided. The Wellness Fee may be reduced or waived in certain circumstances. By reducing or waiving the fee, students are no longer able to access all services at the Center for Health and Well-Being. For detailed information about available services or fee waivers, visit [www.iup.edu/chwb](http://www.iup.edu/chwb).

### Instructional Fee

All students are charged an instructional fee to support academic equipment, library resources, maintenance and repair projects, recreational facilities, and the advancement of technologies. This fee is \$290.20 for full-time students and \$24.20 per credit for part-time students.

### Registration Fee

All students are charged a registration fee of \$32 per semester.

### Late Registration Fees

Late registration fees are assessed to students whose initial semester registration occurs during the following timeframe.

#### Fall

- \$100 will be assessed if the initial fall registration occurs after the last day of the previous spring term.
- \$200 will be assessed if the initial fall registration occurs on or after the first official day of the fall term.

#### Spring

- \$100 will be assessed if the initial spring registration occurs after the last day of the previous fall term.
- \$200 will be assessed if the initial spring registration occurs on or after the first official day of the spring term.

New students and transfer students are exempt from this fee their first term of enrollment. Readmitted students are exempt from this fee their first term of readmission.

### Miscellaneous Costs

In some courses, students are required to obtain supplies and materials to complete course projects. In many courses, a student may make a voluntary contribution to a cooperative fund established for the purpose of obtaining these supplies and/or services at a lower cost. Examples are art courses, field trips, etc.

### Other Costs

In addition to the listed fees, the average student will require \$500-\$1,200 per semester for books, gymnastic costume, student organization dues, personal expenses, etc. These charges are not direct university charges.

### Residence Hall Fee

Current housing rates can be found at [www.iup.edu/housing](http://www.iup.edu/housing). Resident students are required to have a dining plan and can select from six plans (see Dining Plan Fees).

### Student Activity Fee

This fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Council of Trustees. This fee of \$275.50 for full-time and \$109.50 for part-time students per semester covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester. Students attending the regional campuses pay \$269 per semester full-time and \$103 part-time.

### Student Service Fee

This fee will be used to support programming and services that support out-of-classroom experiences for both undergraduate and graduate students. Undergraduate students will be assessed \$6 per credit hour and graduate students \$4 per credit hour.

## Technology Tuition Fee

This fee is assessed for the purpose of acquiring, installing, and maintaining up-to-date and emerging technologies to enhance student learning outcomes. The fee will be assessed to all students per semester as follows:

<i>Pennsylvania Residents:</i>	Full-time	\$116	Part-time	\$68*
<i>Nonresident Students:</i>	Full-time	\$175	Part-time	\$93*

\*The part-time rate for the technology fee is a flat rate per term, regardless of the number of credits taken.

## Transportation Fee

This fee of \$18 is assessed students to address issues related to parking and to improve the transportation system available to students, including increased bus service.

## Summer Sessions Fees (based on Summer 2011)

### Basic Tuition Fee

The basic fee for undergraduate students enrolled for any of the regular summer sessions is \$242 per credit for in-state students and \$605 per credit for out-of-state students.

### Summer Dining Plan Fees

The five-week session dining plan fees for summer are:

<i>Plan A</i>	19 meals per week	\$374.90 (or \$74.98 per week)
<i>Plan B</i>	Any 14 meals per week	\$352.25 (or \$70.45 per week)
<i>Plan D*</i>	Any 10 meals per week	\$337.85 (or \$67.57 per week)
<i>Plan G*</i>	Any 5 meals per week	\$189.50 (or \$37.90 per week)

\*Off-campus students only

### Summer Instructional Fee

All students are charged an instructional fee to support academic equipment, library resources, maintenance and repair projects, recreational facilities, and the advancement of technologies. During the summer, all students are charged \$24.20 per credit.

### Summer Registration Fee

All students are charged a registration fee of \$32 for the summer term.

### Summer Residence Hall Fee

Current summer housing fees can be found at [www.iup.edu/housing](http://www.iup.edu/housing). Students are charged for each session according to the number of weeks they require housing. Resident students can select from two dining plans, 19 meals per week or 14 meals per week.

### Summer Student Activity Fee

This fee in the summer term is \$12.50 per credit (up to a maximum \$150).

### Summer Student Wellness Fee

There is no mandatory wellness fee in the summer. All summer student health fees are optional. For further information, contact the Center for Health and Well-Being at 724-357-9355.

### Summer Technology Tuition Fee

This fee is assessed to all students per summer session as follows:

<i>In-state:</i>	\$68	<i>Out-of-state:</i>	\$93
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## Special Fees

### Additional Course Fees

Additional fees may be attached to some courses; standard tuition fees are also charged. Courses currently carrying additional fees follow.

- **Applied Music Fee:** \$75 per credit—Students enrolled in applied music (APMU) courses will be assessed this fee.
- **Aquatics Course Lifeguard Fee:** Courses involving swimming pool use will be assessed a fee of \$7 per credit.

- **Art Studio Equipment Technician Fee: \$10**—Undergraduate students enrolled in the following courses will be assessed this fee: ART 111, 112, 113, 114, 211, 213, 214, 215, 216, 217, 218, 219, 281, 316, 355, 356, 400, 421, 451, 452, 453, 454, 455, 456, 467, 459, 460, 481, 482.
- **Athletic Training Fee: \$15**—All students enrolled in HPED 346 will be assessed this fee.
- **Biology Lab Fee: \$40**—Undergraduate students enrolled in the following courses will be assessed this fee: BIOL 101, 103, 104, 111, 112, 150, 151, 155, 210, 220, 241, 242, 250, 251, 252, 261, 262, 263, 270, 272, 281, SCI 104
- **Exercise Science Laboratory Fee: \$25**—Undergraduate students enrolled in HPED 343 and 411 will be assessed this fee.
- **Experimental Foods Laboratory Fee: \$50**—Undergraduate students enrolled in FDNT 362 will be assessed this fee.
- **Introductory Foods Laboratory Fee: \$30**—Undergraduate students enrolled in FDNT 151 will be assessed this fee.
- **Nursing Laboratory Courses Laboratory Fee: \$50**—Undergraduate students enrolled in the following courses will be assessed this fee: NURS 211, 213, 331, 333, 337, 431, 433, 437
- **Safety Sciences Laboratory Courses Laboratory Fee: \$25**—Undergraduate students enrolled in SAFE 211, 311, 330, 430, 345, 347, and 412 will be assessed this fee.
- **Special Needs Activity Program Lifeguard Fee (SNAP): \$7**—Undergraduate students enrolled in HPED 344 and HPED 370.
- **Theater Practicum in Production Fee: \$25**—Undergraduate students enrolled in THTR 486 will be assessed this fee.

### Application Fee

A nonrefundable \$45 application fee must accompany the application for admission to the university.

### Advance Deposit Fee

This fee is required of all incoming freshmen to reserve a space in the freshman class and a dormitory room if applicable. Upperclassmen desiring a residence hall room are also required to place a deposit. The advance deposit tuition fee (freshmen) is \$150, and the advance deposit housing fee (all students) is \$80. These deposits are nonrefundable.

### Audit Fee

Full instructional fees are assessed for each course audited, with the exception that persons on Social Security or equivalent retirement benefits are given remission of basic fees for such classes where space is available.

### Bad Check Charge

Students issuing paper checks or ACH e-checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank for any reason will be charged \$34 for each bad check written.

### Clinical Laboratory Science Administrative Fee

Up to a \$75 administrative fee shall be charged each student enrolled at IUP but attending classes at designated clinical facilities. A registration fee of \$32 will be paid to IUP. Tuition, room, and board charged for these students are to be paid by the student directly to the hospital or institution.

### Communications Media Technology and Supplies Fee

A fee of \$10 that assists with the expenses of maintaining the labs and equipment because communications media is a technology intensive major.

### Damage Fee

Students are responsible for damages, breakage, loss, or delayed return of university property.

### Disney International Program Fee

International students participating in the five- to seven-month Disney Reciprocal Exchange Program through the Office of International Education are assessed a fee of \$2,000.

### Evacuation and Repatriation Fee

All registered international students will be charged this fee of \$35 per fall semester and \$45 per spring and summer semesters.

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### Examination for Credit Fee

A fee of \$40 will be assessed for each examination taken for credit.

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### Immigration Fee

All registered international students will be charged an Immigration fee of \$50 per semester.

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### Installment Payment Fee

A nonrefundable fee of \$40 per semester is charged to students participating in the monthly installment payment plan.

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### International Student Orientation Fee

This fee of \$100 is charged to all international students who register for the IUP orientation program to support associated costs.

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### Judicial Fees for Service

Based on judicial sanctions, the following fees will be assessed:

Alcohol Education/Assessment	\$35
Disciplinary Probation	\$50
Stayed removal from residential building	\$75
Removal from halls	\$75
Banned from halls	\$75
Stayed Suspension	\$100
Suspension (must be paid to re-enroll)	\$100

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### Late Payment Fee

A fee of \$30 will be assessed on each monthly payment received five days after the due date, with a maximum of \$120 per semester.

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### National Student Exchange Program Fee

A one-time \$250 nonrefundable fee is charged to IUP students participating in the National Student Exchange Program. Students attending IUP under the National Student Exchange Program will be charged the Pennsylvania resident basic fee and have the application fee waived.

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### Off-Campus Instructional Fee

A fee of 10 percent of the undergraduate in-state tuition rate will be charged to students taking courses at an off-campus site and/or using distance education technology to cover operating costs for services and instructional support at off-campus sites. Students enrolled in Office of Distance Learning and Continuing Education off-campus locations beyond a 25-mile radius are also charged this fee.

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### Portfolio Application/Assessment Fee

A nonrefundable \$15 fee will be charged to a student for each portfolio application per course. Prior to the assessment, a nonrefundable fee of one-half the current tuition per credit is required.

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### Teacher Certification Fee

A fee of \$75 payable to the Commonwealth of Pennsylvania is charged to cover the administrative and recording costs for the issuance of a teaching certificate by the Department of Education. A \$35 fee is charged for students applying for out-of-state certification.

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### Teacher Placement Fee

The College of Education and Educational Technology provides a placement service for students enrolling in pre-student teaching. This fee of \$100 is used to provide students with bus transportation to the initial field placement and to cover other costs associated with this service.

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### Testing Fee

All entering freshmen must participate in orientation and placement testing during the summer immediately preceding the student's matriculation on campus. Fees (assessed by type of admit) of \$85 for the one-day testing program and \$165 for the two-day program are charged. Please see the catalog section on New Student Orientation for further information about the orientation programs for new freshman and transfer students.

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### Transcript Fees

Students can request official transcripts in several ways. If on campus during business hours, the student can go to the Registrar's Office in the lobby of Clark Hall and complete a transcript request form. *There is no charge to students for ordering official transcripts which require routine processing.* Any special handling requests can also be made at that time, and these will have fees assessed. When in the Registrar's Office in person, the student can pay for any special handling requests with cash, check, or a credit card.

Students can also download a Transcript Request form from the website [www.iup.edu/registrar](http://www.iup.edu/registrar), complete it, and either mail or fax it to the Registrar's Office.

Transcripts will be withheld by IUP if a student has an outstanding financial account with the university. Payment of the bill or establishment of a payment plan satisfactory to the university will be required for release of transcripts.

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### Wall Street Journal Fee

Students with majors in the Eberly College of Business and Information Technology will be charged \$20 for the *Wall Street Journal* subscription. This subscription allows business students to view the online edition of the *Journal* at *WSJ.com*. The print version will also be placed throughout the Eberly College of Business. Questions regarding the partnership can be directed to Assistant Dean Cyndy Strittmatter.

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## Billing and Payments

All bills are available on line through IUP EasyPay, which can be accessed through URSA. Students may choose from two different payment plans; otherwise, it is recommended that payment be made in full. Payment by American Express, MasterCard, Discover, and ACH e-checks is available on line. Payment can also be made by mail to the Office of the Bursar.

Students must also confirm they are attending the current semester by logging on to URSA and "Accepting Attendance." Failure to do so may cause a delay in any anticipated aid or loans.

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### Financial Delinquency Policy

Registration is not complete until a student pays the fee for registration, and the university reserves for itself the right to bar a nonpaying student from classes. When it has been determined during the course of a semester that a student's account has become delinquent from accrued charges, the Registrar's Office will be notified of this delinquency and advised to refrain from allowing the student to make further registration transactions, from reporting the student's grades, and from issuing any transcripts for that student's work until the delinquent account has been satisfied. Faculty members will submit a grade for the financially delinquent student; however, requests from students will not be honored, and official reports will be released by the Registrar's Office only after the student has cleared his or her account or has established a payment plan satisfactory to the Office of the Bursar.

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## Delinquent Accounts

Students are not permitted to enroll for any semester, receive transcripts, or graduate until all account balances have been paid in full. Also, credit will not be certified to any other institution until all overdue accounts have been paid. A late payment fee of \$30 will be assessed each month on accounts that are not paid with five days of the due date with a maximum of \$120 per semester. The same regulations will also be applied to inter-semester payments.

Undergraduate students desiring to leave school before the close of a semester must report to the Advising and Testing Center and to the Office of the Bursar to settle all unpaid accounts.

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## Payment of Financial Aid

Financial aid programs that can be deducted from a student's university bill include: Academic Competitiveness Grant, Federal Direct Stafford Loan, Federal Direct PLUS Loan, Federal Perkins Loan, Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, National SMART Grant, Pennsylvania State Grant, and IUP scholarships.

Federal Work Study earnings are paid directly to the student every other week and thus are not used for billing purposes. All other financial aid is paid directly to the student's account. If a credit balance exists after satisfying all IUP charges, excess funds will be refunded to the student for other educational expenses.

## IUP Refund Policy

For a copy of IUP's Refund Policy or a sample refund calculation, please contact the Office of the Bursar at 724-357-2207. The Refund Policy is also available at [www.iup.edu/bursar](http://www.iup.edu/bursar).

## Financial Aid

The Financial Aid Office, located in Clark Hall, offers financial information and counseling to all students attending IUP. The types of financial assistance offered by the Financial Aid Office include student employment, educational loans, scholarships, and grants. Counseling on debt management and loan repayment options is also available.

### Eligibility Requirements

The general requirements for financial aid eligibility include the following:

1. Be enrolled on at least a half-time basis (6 credits per term) except for the Federal Pell Grant program and Federal Work Study program.
2. Be a U.S. citizen, national or permanent resident, or other eligible noncitizen.
3. Maintain satisfactory academic progress in your course of study.
4. Be enrolled or accepted for enrollment in an associate degree, bachelor's degree, Postbaccalaureate Teacher's Certification program, or Postbaccalaureate Second Undergraduate Degree program.
5. Not be in default and must not have failed to make satisfactory arrangements to repay any Federal Student Loans.
6. Not owe a repayment on a Federal Pell Grant or Federal Supplemental Educational Opportunity Grant.
7. Not have borrowed in excess of any Federal Loan limits.
8. Be registered with the Selective Service Administration, if required.
9. Have a valid Social Security Number.

Students must submit a *Free Application for Federal Student Aid* by the April 15 preferred filing date in order to receive maximum consideration for need-based financial aid administered through the university. The Title IV school code for IUP is 003277. Additional forms or applications may be required, depending upon which student aid programs are being sought. Financial aid is available for both the regular academic year and the summer sessions. Separate applications for summer school aid must be submitted by the student.

**Student Responsibilities**—Students who apply for financial aid have certain responsibilities, which are listed below:

1. Accurately complete and submit the appropriate application forms by the published deadline dates.
2. Submit requested materials, corrections, or new information on a timely basis.
3. Meet the regulations and repayment schedules of student loans.
4. Inform the Financial Aid Office of any grants, scholarships, or loans received from outside organizations.
5. Inform the Financial Aid Office of any information that has changed since applying for aid.
6. Understand the satisfactory academic progress requirements for maintaining financial aid eligibility.
7. Use financial aid funds for educational purposes only.

## Financial Aid Programs Available

Financial assistance is available in the form of grants and scholarships, student employment, and educational loans. Each of these funding sources has unique characteristics which are explained in more detail below.

### Employment

The Student Employment Center is available to assist students in finding job opportunities on or off campus. Students may gain access to a listing of available positions by doing any of the following:

- asking to review the employment binder located in the Student Employment Center which is housed within the Career Development Center, 302 Pratt Hall
- reviewing the bulletin board located outside of the office
- accessing the online job listing at [www.iup.edu/studentemployment](http://www.iup.edu/studentemployment)

The Student Employment Center assists students in finding summer employment. During the spring semester, a Summer Job/Internship Fair is conducted, providing IUP students the opportunity to meet with representatives from a variety of organizations (i.e., camps, amusement parks, resorts, recreation areas, and restaurants, to name a few). Representatives from local and out-of-state organizations attend the fair. Students may view a listing of seasonal job opportunities by visiting the website [www.iup.edu/studentemployment](http://www.iup.edu/studentemployment) or stopping by the office to review literature provided by some of the organizations.

Students may be employed on campus for up to twenty-five hours per week when classes are in session and up to forty hours per week during breaks, including summer.\* When classes are in session, most students work an average of ten to twelve hours per week. Students are paid every two weeks for the hours they have worked. Generally, undergraduate students are paid at the minimum wage rate.

All students are eligible to work on campus.\* There are two basic types of funding sources: (1) Federal Work Study Program (FWSP) and (2) University Employment (UE). Eligibility for FWSP is based upon demonstrated financial need as determined from the *Free Application for Federal Student Aid* (FAFSA), which must be completed every year. Inquiries about eligibility for FWSP should be directed to the Financial Aid Office. Students who do not demonstrate financial need may seek UE opportunities. No financial aid application is required.

A FWSP award may affect your eligibility for student loans. For more specific information on how a FWSP award could impact your loan eligibility, inquire at the Financial Aid counter in the lobby of Clark Hall or by e-mail at [financial-aid@iup.edu](mailto:financial-aid@iup.edu).

Off-campus employment opportunities vary by organization, as do the hourly wages and hours worked per week.

\*International students' circumstances may vary. For more information, please consult Student Payroll Services (724-357-2510, G-8 Sutton Hall).

**Service Learning Work Study Program**—This employment program places FWSP-eligible students in community service positions available off campus. In addition to earning money, students gain practical work experience related to their academic major. The Service Learning Center, which assists students in obtaining these opportunities, is part of the Career Development Center located in 302 Pratt Hall.

**PHEAA State Work Study**—This employment program provides Pennsylvania students with employment opportunities in high technology and community service fields. Students can gain career-related, on-the-job work experience. Applications are available in the Financial Aid Office and must be completed by both the student and the organization with which the student would like to be employed. Applications can also be accessed through the PHEAA website at [www.pheaa.org](http://www.pheaa.org).

### Educational Loans

Loan programs offer repayable assistance to students who apply and qualify for them. Repayment terms, interest rates, and borrowing limits vary from program to program. Educational loans are a serious and important obligation. Receipt of funds means that the student assumes the legal responsibility for repayment of the loan at a future date. The promissory note for the loan specifies the terms and conditions under which the student is borrowing and the repayment provisions that are in effect. Participation in community service positions after leaving school may provide for repayment of certain student loans.

**Federal Perkins Loan**—The application for the Federal Perkins Loan is the *Free Application for Federal Student Aid* (FAFSA). The loan is awarded on the basis of financial need to students who have filed their FAFSA by the preferred filing date of April 15. Students who receive this loan must be

enrolled for at least 6 credits each semester. There are no principal or interest payments until nine months after the student ceases half-time attendance (6 credits per term). The minimum repayment rate is \$40 per month at a simple interest rate of 5 percent per year on the unpaid balance. There are deferment and cancellation provisions available.

**Federal Direct Stafford Loan**—The application for the Federal Direct Stafford Loan is the *Free Application for Federal Student Aid (FAFSA)*. By responding on the FAFSA that you are interested in student loans, eligibility will be reviewed for you. First-time borrowers will also need to complete a Federal Direct Stafford Loan Master Promissory Note (MPN) in order to finalize the approval process. The MPN can be completed at [www.studentloans.gov](http://www.studentloans.gov).

Through this program, freshmen may borrow up to \$5,500 per academic year, sophomores may borrow up to \$6,500 per academic year, and juniors and seniors may borrow up to \$7,500 per academic year. An academic year at IUP is defined as the fall, spring, and summer terms. Subsidized Federal Direct Stafford Loans are awarded on the basis of financial need as determined by the FAFSA and require no payment of interest or principal until six months after the student ceases half-time enrollment (6 credits per term). Unsubsidized Federal Direct Stafford Loans require payment or capitalization of interest only during periods of enrollment and the six-month grace period. Following the grace period, both types of Federal Direct Stafford Loans are repayable to the U.S. Department of Education who can also provide current interest rate information.

Federal Direct Stafford Loan entrance counseling must be completed by first-time borrowers at IUP before funds can be released. Additional Unsubsidized Federal Direct Stafford Loan funds are available to independent undergraduate students. Freshmen and sophomores may request up to \$4,000; juniors and seniors may request up to \$5,000. Dependent students whose parents cannot obtain a Federal Direct PLUS Loan may also apply for these additional Unsubsidized funds.

**Federal Direct PLUS Loan**—Parents interested in obtaining the Federal Direct PLUS Loan must establish their eligibility for the loan through a preapproval process at [www.studentloans.gov](http://www.studentloans.gov). Applications will be forwarded to eligible families. Parents may borrow for their dependent children up to the cost of education minus other financial aid. The loans are repaid starting sixty days after the final disbursement for the loan period is issued. The U.S. Department of Education can provide current interest rate and deferment information.

**Alternative Loans**—A wide variety of privately financed educational loan programs are available. Each of these programs offers unique terms and conditions that affect its availability in particular circumstances. Check the IUP webpage at [www.iup.edu/financialaid](http://www.iup.edu/financialaid) for a list of those alternative loans borrowed by IUP students in the last five years if the lender is still participating.

## Grants

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Grants are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

**Federal Pell Grant**—The Federal Pell Grant program provides funds to eligible undergraduate students who have not earned a first bachelor's degree. A *Free Application for Federal Student Aid (FAFSA)* must be filed annually to apply for this grant. Awards are prorated based upon the number of credits for which a student registers. Students may be eligible for a Pell Grant for fall/spring and summer.

**Federal Supplemental Educational Opportunity Grant (FSEOG)**—Federal Pell Grant-eligible students are considered for FSEOG. A *Free Application for Federal Student Aid (FAFSA)* with a receipt date of the preferred filing date of April 15 or earlier must be on file. Students who receive FSEOG must be enrolled for at least 6 credits each semester.

**Pennsylvania State Grant (PHEAA Grant)**—PHEAA Grants are available to eligible part-time and full-time undergraduate students who are Pennsylvania state residents. Part-time recipients must also meet specific PHEAA income guidelines. You must complete a *Free Application for*

*Federal Student Aid (FAFSA)* by April 15 to apply. First-time applicants are also required to complete a PHEAA information form. Academic progress guidelines require that a student earn 12 new credits for each full-time semester for continued eligibility of grant funds. A maximum of eight full-time or sixteen part-time semesters of eligibility is permitted.

**State Grants**—Many state educational agencies offer grant assistance to students who study outside of their state of residency. Out-of-state students are encouraged to investigate opportunities for grant funding from their home state.

## Scholarships

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**IUP Scholarships**—Departments, colleges, and the Provost's Office administer various scholarship programs that have been established by alumni and friends of the university. These scholarships provide gift assistance to academically talented students and assist them in financing their educational expenses. Other than the admission application, no general application is required for consideration. Eligible students are automatically considered for scholarship opportunities. See the website [www.iup.edu/scholarships](http://www.iup.edu/scholarships) for further information. Questions may be directed to the scholarship coordinator in the Financial Aid Office, 1090 South Drive, 200 Clark Hall, Indiana PA 15705; telephone: 724-357-2218; email: [financial-aid@iup.edu](mailto:financial-aid@iup.edu).

**Private Scholarships**—Various service clubs, organizations, churches, schools, and industries offer scholarships to students. High school guidance offices, libraries, and hometown newspapers are often excellent sources for information concerning private scholarships. The Financial Aid Office website provides a listing of various scholarship websites that will enable you to conduct searches on your own and to apply for these scholarships on line. For complete information, students can visit [www.iup.edu/scholarships](http://www.iup.edu/scholarships).

**ROTC Scholarships**—Two-, three-, and four-year on-campus scholarships are available to both male and female students who are enrolled in the Reserve Officers' Training Corps program. The scholarships pay for tuition, fees, and books (\$1,200 per year) and a monthly stipend (\$300-\$500 each month for ten months per school year). Interested students may obtain applications and criteria information by contacting the ROTC department in Pierce Hall at IUP or by calling 1-800-IUP-ROTC.

**PHEAA-Administered Scholarships and Special Programs**—Pennsylvania residents have financial aid available in the form of grants, scholarships, special programs, work-study opportunities, or loan forgiveness. Different types of aid are available for both undergraduate and graduate study. To apply for any of these programs, students will need to complete and submit the *Free Application for Federal Student Aid (FAFSA)*. Some of these programs have submission deadlines that differ from federal programs. For complete information, Pennsylvania students can visit [www.pheaa.org/specialprograms](http://www.pheaa.org/specialprograms).

## Other Resources

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**Athletic Grants-in-Aid**—IUP participates in intercollegiate athletics as a Division II institution and awards Athletic Grants-in-Aid in accordance with NCAA rules and regulations. Interested students should contact the Athletic Director, Memorial Field House, IUP, Indiana, PA 15705, 724-357-2751.

**Community Assistants**—Upperclass students and freshmen at the end of their first year may apply to become community assistants at IUP. Students earn a room and board waiver, as well as a small stipend, by working as community assistants in IUP residence halls. Application timetables and deadlines are advertised in *The Penn* and posted in the residence halls and other locations around campus, including the Office of Housing and Residence Life website. The application process requires references and participation in a semester-long training program prior to selection. Community assistants are selected on the basis of leadership, interpersonal skills, and the willingness and ability to serve as role models. Community assistants must have and maintain a 2.5 GPA. For further information, please contact current community assistants or residence directors or the Office of Housing and Residence Life, G37 Ruddock Hall, 1099 Maple St., IUP, Indiana, PA 15705, 724-357-2696.



**Office of Vocational Rehabilitation Assistance (OVR)**—Students who have physical or learning disabilities may receive educational benefits through the OVR. In order to be eligible, students must satisfy the physical and financial requirements of the agency. For further information, students should contact their county office of vocational rehabilitation.

#### **Pennsylvania National Guard Educational Assistance Program**

**(EAP):** Students who join the Pennsylvania Army National Guard are eligible for a 100-percent tuition grant through the EAP with an additional \$4,500 yearly in Federal Tuition Assistance on top of their GI Bill and GI Bill kicker. Eligible students make a commitment to serve for six years in the Pennsylvania National Guard, serving one weekend a month and two weeks per year. In return, they receive ten semesters of 100-percent tuition if full time. Part-time students receive prorated tuition assistance. Applications and information are available in F6 Pierce Hall or by calling 717-861-8626 or 1-800-GO-GUARD.

### **University Loan Fund**

The Financial Aid Office, in conjunction with the Student Cooperative Association, administers the University Loan Fund on behalf of IUP students. Loans are only available to students who are expecting a financial aid refund that is yet to be disbursed. The maximum loan available will be \$300 with repayment to be made in sixty days. No interest will be charged for these loans. Loans will be made to meet educational expenses only. See the Financial Aid Office for applications for the University Loan and additional information.

The University Loan Fund encompasses the following individual loan accounts:

- Jennie E. Ackerman Loan Fund
- Robert Bellis Loan Fund
- Mary Edna Flegal Loan Fund
- Colette Cromer Gershman Loan Fund
- Margaret Flegal Harte Loan Fund
- Suzanne Marshall Hartman Loan Fund
- John Hays Memorial Fund
- Oliver W. Helmrich Memorial Loan Fund
- William Henzelmann Memorial Fund
- Mary Anne Kolessar Loan Fund
- Jane E. Leonard Memorial Loan Fund
- Mack Loan Fund
- Rusty Preisenderfer Memorial Loan Fund
- Flossie Wagner Sanford Student Loan Fund
- Varsity I Loan Fund
- Norah Zink Loan Fund

### **Veterans Benefits**

The Veterans Affairs Office certifies enrollment for undergraduate and graduate students who may be eligible for veterans assistance. Veterans, reservists, spouses, and children of deceased or disabled veterans should contact the Veterans Affairs Office prior to enrollment.

*Veterans or Chapter 33* 1. Certificate of Eligibility  
*Dependents must submit:* 2. Certified DD214 - Member Copy #4

*Reservists must submit:* 1. Certificate of Eligibility  
2. Notice of Basic Eligibility (DD2384)

Children of a deceased or disabled veteran whose death or injury was due to service-related causes may be eligible for educational assistance from the federal government under Law 634 (Dependents Educational Assistance Act). Immediately upon acceptance to IUP, men and women who qualify for such assistance should contact the veterans counselor and submit: (1) The Eligible Veteran DD214, (2) Survivors Education Form 22-5490, and (3) Certificate of Eligibility.

A veteran receiving VA benefits must request a change in curriculum clearance from the veterans counselor before changing curriculum. Twelve credits are required to be considered a full-time undergraduate student by the Veterans Administration. The minimum full-time requirement for a graduate student is 9 credits.

In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for VA benefits. For further information, veterans should contact the Veterans Counselor, 126 Clark Hall, IUP, Indiana, PA 15705, 724-357-3009 or 724-357-2218. They may also review the IUP veterans website at [www.iup.edu/veterans](http://www.iup.edu/veterans).

### **Title IV Satisfactory Academic Progress Policy**

In order to receive Title IV Federal Student Assistance, students must maintain satisfactory academic progress in their course of study. Students must be in compliance with both the university's Academic Standards Policy and the Financial Aid Sufficient Progress Policy in order to demonstrate satisfactory progress.

These programs include the Federal Pell Grant, ACG Grant, SMART Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Work Study Program, Federal Direct Stafford Loan, and Federal Direct PLUS Loan.

A student who meets the standard of academic good standing of the Academic Standards Policy but who does not meet the standard of sufficient quantitative progress may continue in university registration but without financial aid eligibility for the federal Title IV aid programs.

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Assistance is available at the Financial Aid Office.

### **Title IV Financial Aid Sufficient Progress Policy**

The Financial Aid Sufficient Progress Policy applies to undergraduate students enrolled in the university.

**A. Sufficient Progress:** To be in good standing on a sufficient progress basis, a student must have earned at least 67 percent of the cumulative number of attempted credits at IUP and complete his/her degree within the time frame for degree completion (see Item C of this policy) and be in compliance with the university's Academic Standards policy.

“Attempted credits” is the number of credits for which a student is enrolled at the end of the Drop/Add period.

Each student will be measured for sufficient progress annually after spring grade processing. This evaluation will determine if the student has a sufficient percentage of credits earned in order to be eligible for Title IV funding for the next financial aid award year (Fall term through the following Summer term).

Students will be notified of their financial aid suspension status when a completed *Free Application for Federal Student Aid* (FAFSA) is on file in the Financial Aid Office.

**B. Financial Aid Suspension:** If a student does not meet the sufficient percent of progress evaluation, then all Title IV aid for that student will be suspended beginning with the next semester.

A student who is in this financial aid suspension status, however, will also be reviewed at the end of the semester in order to evaluate if the percent of progress has been met through additional coursework. If this improvement to 67 percent of progress is achieved, then the student's Title IV financial aid suspension will be rescinded beginning with the next term of enrollment.

**C. Time Frame for Degree Completion:** In addition to meeting the 67 percent of progress requirement, all students must complete their degree requirements within an established time frame. Since enrollment status may vary from semester to semester, the maximum time frame for degree completion is measured in terms of credits attempted at IUP plus any credits accepted in transfer to IUP.

An undergraduate student in a program requiring 120 credits must complete the requirements for a bachelor's degree without exceeding 180 credits, including transfer credits and IUP registered credits.

**D. Appeal Process:** Students who have experienced unusual circumstances which have led to a lack of sufficient progress, such as medical emergencies or death of a family member, may submit a written appeal to the Financial Aid Appeals Committee for consideration of reinstatement of Title IV aid

eligibility. This written appeal must specifically outline the reason(s) for the deficiency and how the student will make up this deficiency. For students who do not appeal for fall review, or who are denied an appeal for the fall semester, an appeal for reinstatement of Title IV aid for the spring term will be accepted for review.

After reviewing the written appeal of a student in financial aid suspension, the Financial Aid Appeals Committee may decide to reinstate Title IV financial aid eligibility for specific periods of the next financial aid award year.

**E. Reinstatement of Title IV Aid Eligibility:** A student who has a Satisfactory Academic Progress deficiency must have one of the following occurring in order for that student to receive Title IV assistance:

1. The student can reestablish eligibility for Title IV assistance by meeting the minimum requirements for Satisfactory Academic Progress through additional periods of enrollment at IUP.
2. For a student who has not met the minimum criteria for Satisfactory Academic Progress due to unusual or mitigating circumstances and has filed an appeal(s) which has granted the student continuance of financial aid eligibility, Title IV aid funds may be reinstated.

**F. Treatment of Audits, Incompletes, and Other Grades:** In order that a student fully understands how various grades and enrollments impact upon the calculation of Satisfactory Academic Progress, the following information is provided:

1. **Audits and "S" and "U" Grades:** Because course audits and "S" and "U" grades carry no credits, they are not reviewed or counted for sufficient progress purposes.
2. **Incompletes:** Designations of "I," "L," "R," and "\*" are treated as credits attempted/zero credits earned/no effect on QPA. However, these designations are treated as noncompleted credits and have an impact in the calculation of the percent of progress measure. (Note: The "\*" is an administrative symbol indicating that a grade was not submitted by the instructor at the time of grade processing.)
3. **"F" Repeat with Replacement:** An "F" repeat with replacement is treated as credits attempted/credits earned/with the quality points of the new grade replacing the 0.00 QP of the original "F" grade. An "F" repeat has a positive effect on the QPA and the percent of progress even though it represents an additional number of credits attempted in regard to the percent of progress measure.
4. **"D" Repeat with Replacement:** Repeated classes that are "D" replacements to a student's record are treated as credits attempted/zero credits earned/with the quality points of the new grade replacing the 1.00 QP of the "D" grade. A "D" repeat with replacement may improve a student's QPA but decreases your percent of progress.
5. **Repeats with Averaging:** Courses that are repeated with averaging count as credits attempted/credits earned/with the quality points for the class averaged into the QPA. The maximum time frame for degree completion may be impacted by repeat with averaging classes.
6. **Withdrawals:** Designations of "W" and "Q" are treated as credits attempted/zero credits earned/no effect on QPA. Any type of "W" and/or "Q" designation is treated as noncompleted credits in the calculation of the student's percent of progress standing.
7. **Pass/Fail Grades:** Pass grades are treated as registered credits/credits earned/no effect on QPA. Fail grades are treated as registered credits/zero credits earned/with zero QP averaged into the calculation of QPA.
8. **Noncredit Courses:** Noncredit classes, such as those with Continuing Education Units (CEUs), are not used in measuring sufficient progress, since these classes cannot be applied towards degree requirements and no financial aid may be received for enrollment.
9. **Institutional Credits:** Institutional credits are counted as registered credits/credits completed. The QP for the course is not averaged into the student's overall QPA.
10. **Cancelled Semester:** All credits for which a grade of "C" or better is earned in that cancelled semester are counted as credits attempted/credits earned.
11. **Fresh Start Program:** In the case of students readmitted under the Fresh Start Program, past semesters will still be considered when progress is evaluated.

## **Unofficial Withdrawal**

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Federal Title IV student aid recipients who earn a 0.00 GPA at the end of a semester in which they receive federal student aid will be reviewed to determine whether or not they actually completed the semester. Students with a 0.00 GPA that is attributed to "F", "I", or "\*" grades will be required to provide documentation to the Financial Aid Office regarding their last date of academically related activity. Based on that date, federal student aid may need to be adjusted.

# Student Programs and Services

The services and programs listed in this section are the result of collaborative efforts by student affairs professionals and faculty members to offer the IUP student a unique and fulfilling undergraduate and graduate student experience. The Division of Student Affairs offers a variety of services and programs that support the strategic plan of IUP. These services and programs were designed to meet the needs of IUP students as they learn how to become leaders for tomorrow, live together in a community, make ethical decisions, accept and appreciate diversity, identify and strengthen professional skills, develop good mental and physical health practices, and enhance ways to learn and impart knowledge.

All services, with the exception of those in the last several pages of this section, are under the direction of the vice president for Student Affairs.

## Student Affairs Division Areas

**Website:** [www.iup.edu/studentaffairs](http://www.iup.edu/studentaffairs)

**E-mail:** [iup-hawks@iup.edu](mailto:iup-hawks@iup.edu)

**Rhonda H. Luckey**, Vice President for Student Affairs

**James T. Begany**, Associate Vice President for Enrollment Management  
Associate Vice President for Student Development/Dean of Students: Vacant

**Assistant Dean of Students—Punxsutawney:** Theo G. Turner

**Admissions:** Michael H. Husenits, Director

**Advising and Testing:** Catherine M. Dugan, Director

**African American Cultural Center:** Carolyn D. Princes, Associate  
Dean of Students for Multicultural Affairs/Director

**Athletics:** Francis J. Condino, Director

**Career Development Center:** Mark E. Anthony, Director

**Center for Health and Well-Being:** Malinda Cowles, Interim  
Executive Director

**Alcohol, Tobacco, and Other Drugs:** Ann Sesti

**Counseling Center:** Elizabeth Kincade, Department Chair

**Health AWAREness:** Malinda Cowles

**Health Services:** Scott R. Gibson, Director

**Recreation:** Peter Shoop

**Center for Student Life:** Kathleen R. Linder, Associate Dean of  
Students for Student Life and Civic Engagement

**Financial Aid:** Patricia C. McCarthy, Director

**Housing and Residence Life:** Michael W. LeMasters, Associate Dean  
of Students for Campus Living and Learning/Director

**Student Cooperative Association:** Dennis V. Hulings, Executive  
Director

**Center for Student Success:** Vacant

## Admissions

**Website:** [www.iup.edu/admissions](http://www.iup.edu/admissions)

**E-mail:** [Admissions-Inquiry@iup.edu](mailto:Admissions-Inquiry@iup.edu)

See the Admissions and Registration section of this catalog for information.

## Advising and Testing Center

**Website:** [www.iup.edu/advisingtesting](http://www.iup.edu/advisingtesting)

**E-mail:** [Advising-Testing@iup.edu](mailto:Advising-Testing@iup.edu)

The Advising and Testing Center provides a variety of services to IUP students and faculty. The center runs orientation programs for entering freshmen and transfer students and their parents. The center offers career planning classes and computer-assisted career counseling to undecided majors; coconducts registration for January freshmen, transfers, and regional campus students; processes undergraduate total university withdrawals; serves the needs of students with disabilities; and assists in providing advising information to students and advisors.

**Services for Students with Disabilities:** Disability Support Services (a unit of the Advising and Testing Center) is the primary agent for the provision of access for IUP students with physical, learning, and other disabilities. Faculty and staff members within the office serve to ensure IUP's program access compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Students with disabilities who seek services must register with the office. Services provided may include, but are not limited to, early registration; assistance in locating accessible housing;

equipment loan; test proctoring and reading; notetaking; recording of books; NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 216 Pratt Hall, calling 724-357-4067 (V/TD), or by at the Advising and Testing website.

**The Major and Career Exploration Center (MCEC):** Students with undecided majors are encouraged to explore options for majors as early as possible while at IUP; to delay doing so may delay graduation. Students desiring to explore majors may take a 1-credit course, ADVT 170 Career Exploration, taught by the Advising and Testing Center, or use the MCEC, 216 Pratt Hall. The MCEC is open afternoons and early evenings during the week. You may also visit the website at [www.iup.edu/exploremajors](http://www.iup.edu/exploremajors). Appointments may be made by calling 724-357-5701.

## African American Cultural Center

**Website:** [www.iup.edu/aacc](http://www.iup.edu/aacc)

The African American Cultural Center is dedicated to the enhancement of multicultural awareness and racial sensitivity. Through educational, cultural, and social activities, the center strives to foster growth, development, awareness, and sensitivity among all members of the university community while it focuses on preserving and fostering an appreciation of African American history, culture, contributions, and development.

Opportunities for informal exchanges, meetings, and a library of varied African American materials and resources are available. Besides cultural programming, mentoring, opportunities also exist for leadership and personal development, cross-cultural interactions, and community connections. Programming suggestions are welcomed, and AACC Booster Club membership is encouraged but not required. The center is open to the entire campus and local communities and is located in Delaney Hall, Suite B25.

## Athletics

**Website:** [www.iupathletics.com](http://www.iupathletics.com)

**Varsity Sports:** The university offers nineteen varsity sports for men and women. It competes at the Division II level of the National Collegiate Athletic Association and is in the Pennsylvania State Athletic Conference.

Men's sports offered in the fall include cross country and football. The winter sports include basketball, indoor track, and swimming. Spring sports are track and field, golf, and baseball.

Women's fall sports are cross country, soccer, volleyball, and field hockey. In the winter, the sports of basketball, indoor track, and swimming are offered. Spring sports include softball, track and field, lacrosse, and tennis.

## Career Development Center

**Website:** [www.iup.edu/career](http://www.iup.edu/career)

**E-mail:** [career-services@iup.edu](mailto:career-services@iup.edu)

Career services are available to students and alumni, and career counseling is provided to students of all class levels as well as to alumni. In addition to career counseling, the primary functions of the office are to arrange for campus interviews, prepare a current file of job opportunities, maintain an extensive library of occupational information, conduct follow-up studies of graduates, and provide general assistance in the career planning and job-seeking process.

The center also receives and makes available to graduates and undergraduates information concerning summer employment and internships. The university does not guarantee positions, but IUP's record of placement is one of the very best in Pennsylvania.

Service Learning offers IUP students curriculum-based, wage-supported, and volunteer opportunities to explore, expand, and fulfill their altruistic interests. They work closely with nearly sixty Indiana County human service agencies and six school districts to place students in volunteer host sites.

**Internships/Cooperative Learning:** Many departments of the university have developed internship/cooperative education programs which allow

a student to participate in university-supervised work experiences for variable academic credit. Internships/co-ops are viewed as an integral part of a student's academic preparation. An internship/co-op gives the student an opportunity to apply theoretical and philosophical tenets of a discipline in a practical job experience related to the student's academic program.

For general information about university internships, co-ops, and placement options, consult the internship coordinator in the Career Development Center, 302 Pratt Hall, or the student's department internship/co-op coordinator, or visit the website [www.iup.edu/internships](http://www.iup.edu/internships).

**Experiential Education Office:** The Harrisburg Internship Seminar (T.H.I.S.) is available to an exceptional student from any IUP major for the fall or spring semester. The program provides a semester-long experience at the policymaking level in the executive or legislative branches of state government as well as independent boards, agencies, or commissions. Students will earn 15 credits.

Requirements for eligibility are 60 or more earned credits and a cumulative GPA of at least 3.0. Applicants must also submit a sample of their writing skills which must be a copy of an IUP writing assignment that has been graded by an instructor.

T.H.I.S. consists of an internship with a research project for 12 credits and an academic seminar for 3 credits. The program is directed by a Pennsylvania State System faculty member elected to direct the program in Harrisburg. The faculty member will be the site supervisor and teach the seminar course. Grades and credits will be recorded on the students' academic progress reports at IUP. See the course descriptions under UVWD 480 and 493.

Housing with kitchenette is arranged at minimal cost to students. Students must first pay IUP tuition, room, and board and then be partially reimbursed via a biweekly paycheck during the semester. Students are responsible for their own transportation costs between their home and Harrisburg.

T.H.I.S. is offered through the Internship Center, Career Development Center, in conjunction with the academic department of the successful candidate. Applications are submitted to the Internship Office, 302 Pratt Hall. Deadline for submission for fall is March 1; the spring semester deadline is October 1. See the website [www.iup.edu/internships](http://www.iup.edu/internships) for more information.

## Financial Aid

**Website:** [www.iup.edu/financialaid](http://www.iup.edu/financialaid)      **E-mail:** [financial-aid@iup.edu](mailto:financial-aid@iup.edu)

See the Financial Aid section of this catalog for information.

## Center for Health and Well-Being

**Website:** [www.iup.edu/chwb](http://www.iup.edu/chwb)      **Telephone:** 724-357-WELL (9355)

IUP's Center for Health and Well-Being houses wellness-related student services. Health and counseling services Health AWAREness; Recreation; the Haven Project; Nutrition Connection; and the Alcohol, Tobacco, and Other Drugs programs are located in the center in the Suites on Maple East. The center offers students easier access to services and programs, smoother referrals among services, and a more complete, coordinated service. Most services within the center are funded by the students' Wellness fees.

## Alcohol, Tobacco, and Other Drugs

**Website:** [www.iup.edu/atod](http://www.iup.edu/atod)      **Telephone:** 724-357-4799

The Alcohol, Tobacco, and Other Drugs (ATOD) Program provides leadership to the university community in reducing alcohol, tobacco, and other drug use and related negative consequences. The program administers and supports prevention and intervention services that encourage students to make healthy lifestyle decisions to improve their overall well-being and enhance their academic and personal success. ATOD is located in the Suites on Maple East.

## The Counseling Center

**Website:** [www.iup.edu/counselingcenter](http://www.iup.edu/counselingcenter)      **Telephone:** 724-357-2621

The Counseling Center faculty members are psychologists who are assisted by advanced graduate students from the doctoral program in clinical psychology. These professionals facilitate the personal and emotional growth

of students by offering confidential counseling and consultation on an individual and small-group basis. A half-time faculty member, funded through the Haven Project, counsels students who have experienced violence. Counseling services are paid for through the Wellness fees.

Faculty members provide individual consultation to faculty, staff, families, and friends of students who may have concerns about a student. The Counseling Center also offers outreach education through programs and workshops conducted on a variety of topics, including stress management, eating disorders, grief, and healthy relationships. For more information, contact the center at 357-2621 or visit the Suites on Maple East G-31.

## Haven Project

**Website:** [www.iup.edu/haven](http://www.iup.edu/haven)

**Telephone:** 724-357-4799; **24-hour Hotline:** 724-349-4444

The Haven Project provides counseling and advocacy services for students who experience violence. The Haven Project also offers prevention education about stalking, dating/relationship violence, and sexual assault. It is a collaboration with University Police, the Pennsylvania State Police, Indiana Borough Police, the Alice Paul House, and the Counseling Center.

## Health AWAREness

**Website:** [www.iup.edu/healthawareness](http://www.iup.edu/healthawareness)

**Telephone:** 724-357-4799

Health AWAREness provides educational programs and services that encourage students to make healthy lifestyle choices. Common issues addressed through Health AWAREness programs include sexual and other violence, sexual health, HIV/AIDS, stress management, and body image. Health AWAREness sponsors a speakers' bureau that provides presentations in classrooms, residence halls, and student organization meetings. The Haven Project, in collaboration with the Alice Paul House, provides twenty-four-hour legal and medical advocacy services for victims of sexual and other violence. Students who need assistance in accessing health and human services can receive help by contacting Health AWAREness.

## Health Service

**Website:** [www.iup.edu/healthcenter](http://www.iup.edu/healthcenter)

**Telephone:** 724-357-2550

The Center for Health and Well-Being operates an outpatient clinic and provides routine health care to students on days classes are in session. Health Service, the outpatient clinic, is staffed by nurse practitioners and nurses. It operates on a mostly walk-in basis without appointments. For emergency care, the local hospital emergency room is available 24/7. (Hospital services are not covered by the Wellness fee.) The Wellness fee, paid by full-time students, includes all out-of-pocket expenses for local ambulance service.

In addition to clinical care, including some minor surgical procedures, some laboratory testing, and allergy injections, Health Service offers a self-care cold center with free over-the-counter medicines and no waiting. Transportation to local medical facilities for scheduled local appointments during patient care hours is also available.

IUP requires documentation of dates of immunization from new students for the following vaccines: measles, mumps, polio, rubella, tetanus toxoid, and diphtheria. A self-completed health history form is also a part of the student health record. Students living in university-owned residence halls and apartments are required to have the vaccination for meningococcal meningitis or to sign a waiver stating that they do not wish to have the vaccination.

Students pay a per-semester mandatory Wellness fee, which varies based upon the student's enrollment status. Some services and products are included in this fee, while others, such as medications and physicals, require an additional fee-for-service. Refer to the Finance section of this catalog for fee information. The Wellness fee is not an insurance plan. It is highly recommended that students who do not have an insurance plan consider purchasing coverage prior to arriving at IUP. Health Service does not bill insurance companies for services; however, a student can receive a receipt for each visit that can be used to submit the bill to his/her insurance company. Information about a student group health insurance plan endorsed for IUP students is available from Health Service. Call Health Service at 724-357-

6475; see the website for information about student health insurance options; or visit the Suites on Maple East.

### Nutrition Connection

**Website:** [www.iup.edu/foodnutrition/nutritionconnection](http://www.iup.edu/foodnutrition/nutritionconnection)

**Telephone:** 724-357-4440

Nutrition Connection services are sponsored by the Department of Food and Nutrition with support from Center of Health and Well-Being in the Suites on Maple East and Student Cooperative Association.

The purpose of Nutrition Connection is to provide preprofessional training in nutrition intervention to junior and senior dietetics majors and to provide IUP students with information about nutrition for a variety of personal concerns. The overall goal of Nutrition Connection is to promote healthy eating and body weight with nutrition recommendations tailored to meet individual needs, preferences, and goals.

Nutrition Connection offers nutrition assessment and intervention through individual counseling. Services are provided by students who have completed coursework in wellness and clinical nutrition and who are currently enrolled in FDNT 463 Nutrition Counseling. A registered dietitian and IUP faculty member teaches the course and supervises all of the services. Services are also monitored by graduate students majoring in nutrition. This service is available in the fall and spring semesters.

### Recreation

**Website:** [www.iup.edu/fitnessrecreation](http://www.iup.edu/fitnessrecreation)

**Telephone:** 724-357-WELL (9355)

Recreation provides a variety of ways for students to be physically active on campus. Recreation offers fitness instruction through the aquatics program and classes at the Center for Health and Well-Being. Informal use of recreational facilities in Zink Hall and Memorial Field House is available for basketball, racquetball, volleyball, water polo, and floor hockey. Some services may have an additional fee. To see a complete list of programs, visit the website [www.iup.edu/fitnessrecreation](http://www.iup.edu/fitnessrecreation).

## Housing and Dining Information

**Website:** [www.iup.edu/housing](http://www.iup.edu/housing)

**E-mail:** [iup-ohrl@iup.edu](mailto:iup-ohrl@iup.edu) or [iup-dining@iup.edu](mailto:iup-dining@iup.edu)

**Residence Life:** IUP is a residential campus. The suites, residence hall, and apartment building are supervised by professional residence directors, educated in student development or counseling or by graduate residence directors enrolled in the Student Affairs in Higher Education graduate program.

It is the policy of IUP to offer full, equal, and nondiscriminatory assistance to all students without regard to their race, color, religion, national origin, gender, ancestry, sexual orientation, or physical ability in both the placement in university housing and the furnishing of facilities and services in relation to that housing.

Specific programs and services offered within the residence halls provide a residential program that supports the academic mission of the university and fosters the development of a community in which the rights and responsibilities of each person are clearly defined and respected.

Rooms/apartments are available to both undergraduate and graduate students enrolled at IUP. Each year the university reviews its housing policies and revises them according to needs for the following year. The Office of Housing and Residence Life is also responsible for dining service and providing information and services related to off-campus housing. The Office of Housing and Residence Life is located in Ruddock Hall, 724-357-2696.

In an effort to make residence hall living more responsive to individual needs, the university offers a variety of living arrangements. Student options include interest floors related to academic majors, intensive study floors, a service learning floor, a career investigation floor, and substance-free floors. Students should consider these options carefully and select the one with which they would feel most comfortable.

**First-Year Residency Requirement:** A two-semester residency requirement was implemented beginning in the 2006-2007 academic year to support student academic success, enhance student development, and assist students in making a smooth transition to university life. All first-year students are required to reside on campus. Exceptions to this requirement include students who a) commute no more than 50 miles from the home of their parents or guardian, b) are married, c) have dependent children living with them, d) are veterans of military service, or e) are 21 years of age or older. Students requesting an exemption to IUP's residency requirement must complete a "Residency Requirement Exemption Request Form" available from the Office of Housing and Residence Life, Ruddock Hall.

**Residence Hall Application:** First-year and transfer students will be offered residence hall license agreements soon after they remit the \$150 tuition prepayment required to secure a place in the incoming class. The Online Housing Agreement should be submitted along with an \$80 housing prepayment as soon as possible. Rooms will be assigned on a first-come, first-served basis, and students will be sent an e-mail confirmation immediately after submitting the agreement.

Continuing students may contract for university housing for the following academic year according to the process published and posted in October. Students being readmitted or returning from student teaching or study abroad programs should contact the Office of Housing and Residence Life.

**Dining Services:** IUP offers seven meal plans, six of which are available to residence hall students. See the Finance section of this catalog for meal plans and fees, and for more information, contact [iup-dining@iup.edu](mailto:iup-dining@iup.edu), or on line at [www.iup.edu/dining](http://www.iup.edu/dining).

**Residence Hall Association (RHA):** The RHA represents all students living in university housing. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents; to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures. All residence hall students are encouraged to participate in RHA and may inquire at their residence hall office for involvement opportunities.

## New Student Orientation

**Website:** [www.iup.edu/advisingtesting](http://www.iup.edu/advisingtesting) or [www.iup.edu/orientation](http://www.iup.edu/orientation)

**E-mail:** [Advising-Testing@iup.edu](mailto:Advising-Testing@iup.edu) or [my-success@iup.edu](mailto:my-success@iup.edu)

IUP offers a two-part orientation program for all new freshman and transfer students. Students are expected to participate in both programs, as they are intended to provide information and programs designed to ensure a successful first-year or transfer experience. IUP views this two-part student orientation as unique and extremely important to initial retention and satisfaction with the university. The first year at IUP is critical in regard to academic success. During this time, students must simultaneously develop academic competence in the college curriculum and adjust to the personal decision-making process college life affords. Each of the programs is designed to assist in this important college adjustment process. Freshmen and transfer students are expected to participate fully in this two-part program.

**Freshman Spring/Summer Orientation:** The orientation, placement testing, advising, and course registration program occurs during the spring or summer immediately preceding students' matriculation on campus. This orientation is designed to assess academic readiness for courses integral to the IUP curriculum and acquaint students with the IUP collegiate experience. Placement tests are one of the tools used for advising students so that students can register for courses that are appropriate given their selected major and their proficiency in English, mathematics, and foreign languages.

Students participate in an overnight, two-day experience which includes testing, academic advising, and orientation to university curricular requirements and cocurricular opportunities. Concurrent parent orientation programs are offered. (Condensed August and January programs are offered as well for late fall and January admits.)

**Transfer Summer Orientation:** Transfer orientation serves to acquaint students with prior college experience with IUP resources to support

academic and career success. The program also provides placement testing for students in selected majors. The program concludes with advisement and course registration. A concurrent parent program is offered.

**Welcome Weekend:** Welcome Weekend occurs as students move onto campus immediately prior to the beginning of fall classes. Programs and activities are designed to assure a smooth transition from the home (or other college) environment to IUP's campus community.

**Convocation:** Convocation serves as both a capstone to Welcome Weekend and as a start to the semester. In a manner similar to Commencement, faculty, students, staff, and administrators join together to celebrate—in this case, the opening of a new academic year and IUP experience.

**CUSP:** The Early Entrance Experience, a formal, credit-bearing orientation program (see Developmental Studies for more information).

## Student Conduct

**Website:** [www.iup.edu/studentconduct](http://www.iup.edu/studentconduct)

The Office of Student Conduct is housed within the Center for Student Life and provides direction and leadership for the administration of university policies and regulations regarding student behavior. This includes the adjudication of alleged violations by individual students and by recognized student organizations.

IUP is an academic community within the society at large. As a community, the university has developed a code of standards and expectations that are consistent with its purpose as an educational institution. IUP reaffirms the principle of student freedom, coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. As a member of the academic community and of the larger society, a student retains the rights, protections, guarantees, and responsibilities held by all citizens.

The intent of this educational system is to encourage behavioral change in the student; promote civility, openness, and justice; and also protect the rights of the members of the university community. The student conduct system of IUP exists to review all alleged violations of university regulations and/or federal, state, and local ordinances. The system will hold the student accountable for his/her actions when IUP regulations or statutes have been violated.

The primary function of the student conduct system is to adjudicate alleged policy violations by students that occur on campus. The university reserves the right to adjudicate violations by students in off-campus locations when those violations might adversely affect the university community. The university maintains the right to amend its rules and to make such amendments effective immediately upon appropriate public notification of students. A complete statement of regulations is available in the student handbook at [www.iup.edu/studentconduct](http://www.iup.edu/studentconduct). For more information, call 724-357-1264 or visit 307 Pratt Hall.

## Student Cooperative Association

**Website:** [www.iup.edu/coop](http://www.iup.edu/coop)

**E-mail:** [co-op-store@iup.edu](mailto:co-op-store@iup.edu)

The Student Co-op has played an extremely valuable and significant role in the cocurricular life of the university since 1933. All students, faculty members, and staff members who pay the activity fee are members of the association. Virtually all campuswide activities outside the instructional program are sponsored entirely or in part by the Co-op. The student's I-Card will admit him/her free of charge or at a reduced fee to university social, cultural, and athletic events.

The Student Co-op operates the Hadley Union Building (HUB) complex, which includes the Co-op Store and the HUB Fitness Center. The HUB, built by Co-op members through the activity fee, offers many facilities for use by the university community.

The Co-op Recreational Park comprises 270 acres of wooded hillsides and fields. Included are a lodge building which will accommodate groups of up to two hundred people, a ski hut, an eighteen-station exercise course, cross-country skiing and hiking trails, a picnic shelter, an archery range, two softball fields, and a pond for fishing.

*The Penn*, IUP's campus newspaper, is published two times per week during the fall and spring semesters by students wishing to gain practical experience in journalism, business, advertising, marketing, and graphic design. Students are encouraged to join the staff of *The Penn*, regardless of their chosen major. Applications for staff positions may be obtained from *The Penn* office, Room 235 of the HUB or online at [www.thepenn.org](http://www.thepenn.org).

## Center for Student Life

**Website:** [www.iup.edu/studentlifecenter](http://www.iup.edu/studentlifecenter)

As participating members of the IUP community, students occupy a responsible role in governing and shaping campus life. Since a valuable part of education lies in participation in groups and activities in which experience in leadership, social and community responsibility, intellectual curiosity, and spiritual interests can be met, active participation in varied organizations is available and encouraged. The center is located at 307 Pratt Hall.

There are currently more than 220 recognized student organizations, including Greek Life, at IUP advised by faculty or staff selected by the students. Students are also encouraged to initiate and support new groups which reflect interests not currently represented by existing organizations.

Under the direction of the Center for Student Life and funded primarily by the Student Co-op, many activities are orchestrated by recognized student organizations. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development that involvement provides.

*The Source*, the student handbook, is distributed to all students electronically at [www.iup.edu/studentconduct](http://www.iup.edu/studentconduct). It is maintained by the Center for Student Life and includes rules, regulations, policies, and procedures.

**Student Government Association (SGA):** The SGA is the representative and recognized voice of IUP's student body. It was reconstituted in spring 2005 to be the unified voice of the students. The SGA is led by a president and a vice president elected at large in a spring general election. A primary responsibility of the SGA lies with the student members of various university advisory bodies, including the Student Cooperative Association Finance Committee, which allocates funds in support of university activities. Each member of the SGA is a representative on the University Senate, the institution's chief governing body. The SGA meets bimonthly. Every student enrolled at IUP is considered a member of the SGA, and input is always sought and welcome. For more information, visit SGA at 210A HUB or contact SGA at 724-357-1302.

## Center for Student Success

**Website:** [www.iup.edu/success](http://www.iup.edu/success)

**E-mail:** [my-success@iup.edu](mailto:my-success@iup.edu)

The Center for Student Success is located in Pratt Hall and features a centralized set of student support services to assist students in achieving both educational and career planning success. Intended to involve students from the start of their first semester, the center is staffed by university personnel who know what it takes to both survive and succeed in college. The center offers services for transitioning students to the IUP university environment and to preparing them to successfully complete their academic program. In addition to the IUP faculty members, advisors, and administrators who direct and staff the offices that compose the center, there are carefully selected and specially trained upperclass students who serve as peer mentors and peer advisors. The center boasts a specialized computer lab to provide individualized assistance to students to complete very polished classroom assignment projects and academic presentations. The center also provides outreach services for students who are veterans or nontraditional undergraduate students. Tutorial services, supplemental instruction, leadership training, civic engagement, career development, student life services, advising and testing, and developmental studies are all contained within the center. Staff members at the center are prepared to make referrals and place the student in contact with other university offices when very specific questions and needs arise. It cosponsors Convocation and contributes to the planning and implementation of the New Student Orientation Program and Fall Welcome Weekend.

## Veterans Affairs

**Website:** [www.iup.edu/veterans](http://www.iup.edu/veterans)

**E-mail:** [vets@iup.edu](mailto:vets@iup.edu)

The Veterans Affairs Office, located in 126 Clark Hall, provides many services to veterans, including academic support, tutoring, housing assistance, financial aid, and general information. For information on forms, call 724-357-3009. The Federal Veterans Office number is 800-827-1000.

A Veterans' Outreach Committee, composed of students, faculty, and administrative staff, meets regularly to survey and assess the veteran student's needs and concerns, taking the lead to raise awareness issues on campus. The Veterans' Student Liaison Office, located within the Center for Student Success, provides IUP veteran students (veterans of the U.S. military; students who have completed service or who are currently serving in the military) with the necessary resources for academic and personal support, individually and through programming, with a personalized approach. This office coordinates with the Veterans' Outreach Committee by collecting and sharing students' comments and concerns.

### The following services are available to IUP students but do not report to the Division of Student Affairs.

#### Center for Learning Enhancement

The center is an academic support service sponsored by the Department of Developmental Studies. The center provides educational support services in the areas of reading, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. See more information at the Department of Developmental Studies section of this catalog.

#### CUSP: The Early Entrance Experience

The Department of Developmental Studies offers a pre-college experience to all incoming first-year students. Please see the Department of Developmental Studies section of this catalog for more information.

#### IT Support Center

**Website:** [www.iup.edu/itsupportcenter](http://www.iup.edu/itsupportcenter) **E-mail:** [it-support-center@iup.edu](mailto:it-support-center@iup.edu)

The IT Support Center provides proactive and reactive measures to assist students of IUP with orientation to and use of computers and other technology at IUP. One of the goals of the IT Support Center is to provide students with a place to go for advice and assistance with issues related to computers and other technology on the campuses of IUP.

The center can address student questions concerning e-mail, web pages, computer account usage, policies, and network services. Students may contact the support center via e-mail ([it-support-center@iup.edu](mailto:it-support-center@iup.edu)) or emergency issues via phone (724-357-4000). The website (above) includes several sections which might help students to answer their own questions. Students are also welcome to visit the IT Support Center at Delaney Hall, Suite G35, for personal assistance with their computing problems.

#### Parking

**Website:** [www.iup.edu/parking](http://www.iup.edu/parking)

**E-mail:** [parking-services@iup.edu](mailto:parking-services@iup.edu)

Three types of parking permits are available to students: 1) Commuter permits are allocated to individuals traveling from outside the set boundaries to class each day, 2) Resident permits are designated for graduate students living on campus, and 3) Robertshaw permits are available for a fee for long-term parking by undergraduate students living in university-owned residence halls. Permits are available at the URSA website. Parking regulations and maps can be viewed on line at [www.iup.edu/parking](http://www.iup.edu/parking).

The University Parking and Visitor Center is open Monday through Friday from 7:00 a.m. to 3:00 p.m. and is located at 850 Maple Street, University Towers, Indiana, PA 15705. Questions should be addressed to the Parking Services Department at 724-357-8748 (VSIT).

#### Student Rights/Directory Information

The following information is considered directory information under the Family Educational Rights and Privacy Act (the Buckley Amendment of 1974) and may be released without the student's permission: name, address,

telephone number, dates and status of attendance (enrolled, part-time/full-time) and previous institutions attended, degrees conferred, major field of study and class, awards and honors, past and present participation in officially recognized sports and activities as well as physical factors of athletes (such as height and weight), and e-mail username.

Students may request that directory information not be publicly released by completing a form available in the Office of the Registrar, Clark Hall Lobby. Forms must be filed by the end of the second week of fall semester classes in order to have directory information omitted from the printed Campus Directory. Upon receipt of this signed form in the Registrar's office, all information will be withheld, even beyond graduation, unless the student requests in writing that this nondisclosure request be rescinded.

#### Students Rights Under the Family Educational Rights and Privacy Act (FERPA)

FERPA affords students certain rights with respect to their education records. They follow:

1. The right to inspect and review the student's education records within forty-five days of the day the university receives a request for access. Students should submit to the Registrar, college dean, department chair, or other appropriate official, written requests that identify the records they wish to inspect. The university official will arrange for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the official to whom the request was submitted, that official will advise the student to whom to direct the request.
2. The right to request amendment of the student's education records that he/she believes are inaccurate or misleading. Students should submit such requests in writing to the appropriate university official. The written request must clearly identify the part of the record the student wants to be changed and must specify why it is inaccurate or misleading. If the university decides not to amend the record as requested, the student will be notified by a university official of the decision, who will advise the student of his/her right to a hearing regarding the requested amendment. Additional information regarding hearing procedures will be provided to the student when he or she is notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is to school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person with whom the university has contracted (such as an attorney, auditor, or collection agent); a person serving on the Council of Trustees; a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his/her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his/her professional responsibility. This includes school officials in other institutions to which a student is seeking admission or intends to enroll.
4. The right to file a complaint with the United States Department of Education concerning alleged failures by IUP to comply with the requirements of FERPA. The name and address of the office that administers FERPA follows: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-4605.

# Academic Policies

**Note:** Please see individual college sections for policies pertaining only to particular colleges and majors.

## Classification of Students

To be classified as full-time for the fall, spring, or summer semester, undergraduate students must be currently enrolled in at least 12 credits. Full-time classification for students enrolled in instructional periods that do not conform to the regularly scheduled academic sessions will be based upon the number of enrolled credits during that period of enrollment (e.g., one credit in one week of instruction would equal the minimum full-time certification standard).

For purposes of designating students by class, the following credit classification ranges are used:

<b>Freshmen</b>	Fewer than 30 credits
<b>Sophomores</b>	30-59 credits
<b>Juniors</b>	60-89 credits
<b>Seniors</b>	90 credits or more

Class designations are based on credits earned rather than credits attempted. Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

## Normal Credit Loads

A normal credit load is 15-17 credits. A student who wishes to schedule 18 or more credits must obtain approval from the dean of the college in which he/she is registered; approval will be predicated upon various criteria such as the student's demonstrated competencies, total courses, and specific conditions. If approval is granted, the dean will set the credit limit and make the appropriate computer entry. A student is responsible for paying a per-credit fee at the current tuition rate for each credit beyond 18.

## Schedule Changes (Drop/Add)

IUP's registration system is University Records and Systems Assistant (URSA). From the student's initial registration time for a given semester through the end of the drop/add period, as defined by the academic calendar ([www.iup.edu/academiccalendar](http://www.iup.edu/academiccalendar)), a student may modify his/her schedule to the extent that classes are available or permission to register for a closed or restricted section has been granted and entered into URSA. Each student is responsible for completing all appropriate transactions in URSA to ensure schedule accuracy. Note that, while the department may enter permission to register for a section, the student must complete the actual registration transaction in URSA.

## Advanced Placement and Credit/Exemption Examinations

Courses taken by students prior to college admission under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted credit toward the number of credits required for graduation.

For students who have had other unusual opportunities for instruction or have advanced in a given field, an opportunity to gain credit and/or exemption from a course is afforded through examinations. University Testing Services in the Career Development Center offers credit options through the College Level Examination Program (CLEP).

Students have an opportunity to gain exemption or credit through successful completion of comprehensive examinations by requesting from the academic department an exam as a substitute for completing all the usual requirements of the course.

A student who passes an exemption examination will be exempt from taking that course in his/her academic program. When a student receives credit for a course by examination, the credit will be applied to graduation requirements just as though the course had been taken. If a student is

granted exemption only (no credits) from a course, he/she will be permitted to take a free elective in place of that course. This enables the student to specialize further, correct weaknesses outside the major field, build knowledge in an ancillary area, or be introduced to an entirely different area.

Courses for which credit or exemption are awarded by examination will not be used in the determination of grade-point averages.

## Internship/Cooperative Education

Students may apply for an internship if they have completed 60 credits and have at least a 2.0 GPA. Internship sites are normally located within a 500-mile radius of the campus. Overseas placements are located near an IUP center. Internships are available in state and federal offices; businesses at the local, state, and national level; state-related agencies; corporations; and foundations.

Students may apply for a co-op if they have completed 30 credits and have at least a 2.0 GPA. Two experiences are required. Sites are national and international. Placements parallel those of the internship program.

Because internships are viewed as an integral part of the student's academic program, students who are interested in specific internship programs should consult with the internship advisor in the department of their major. A maximum of 12 credits is applicable to an undergraduate degree program from any combination of co-op and internship experiences.

## Prior Learning/Portfolio Assessment

### Prior Learning Assessment Programs

IUP offers several methods for earning university credit for college-level learning gained through work and life experience. Through the Career Development Center, the College Level Examination Program (CLEP) offers standardized examinations in general and specific subjects. In addition, departmental examinations are available in specific areas on a limited basis.

Where examinations are not available, portfolio assessment may provide the student with the opportunity to present evidence of learning for evaluation by a university faculty member. Through portfolio assessment, work and life experiences are evaluated to determine their appropriateness and applicability for university credit. Credits earned through prior learning assessment may not be applied toward university residency requirements for awarding of degrees. In addition, no more than one-half of the credits required for a student's major may be earned by CLEP, departmental examination, and portfolio assessment. Contact the Office of Distance Learning and Continuing Education (DLCE) for information regarding portfolio assessment.

**Policy:** IUP has authorized a policy for assessment of prior learning that took place outside traditional classrooms in a procedure known as Portfolio Assessment. It is particularly designed for adults with extensive documentable knowledge from work experience, travel, independent study, or other out-of-class experiences.

### Principles:

1. Credit awarded through portfolio evaluation must conform to specific course titles listed in this catalog. Credit awards for general broad areas (block credit) will not be permitted.
2. In order to request a portfolio assessment, the student must be currently enrolled at IUP. Credit awarded must be intended for use as part of a degree or certificate program.
3. Each department will determine the maximum number of credits to be awarded for prior learning for its major. In no case will more than one-half of the major be earned through CLEP, challenge examinations, and other forms of prior learning assessment.
4. Credits earned through portfolio assessment may not apply as residency credit for the purpose of awarding degrees.
5. Credits earned through portfolio assessment may be awarded only as regular course credit.



6. If a related examination is available through CLEP or if a challenge examination has previously been established for the course, a portfolio assessment of those credits will not be accepted.
7. Acceptance of portfolio assessment credits by the department will be indicated by the signature of the chairperson of the department offering the course. The dean of the appropriate IUP college and the director of the Office of DCLE must also indicate approval.
8. Students may qualify solely for undergraduate credit—not graduate credit.
9. The title of the course, the credits, and the indication that credit was earned through Portfolio Assessment will be recorded on the academic record.

#### Procedures:

1. Student meets with the director of the Office of DLCE to determine the feasibility of earning credits through portfolio evaluation. Standard outlines of related courses are provided to student.
2. Preliminary Application Form—Student must provide a resume and answer the following questions:
  - a. What have you learned that relates to this course?
  - b. Where and when have you learned it?
  - c. What documentation do you have that supports the claim?
3. A handbook to assist students in compiling a portfolio will be printed. It will show how to relate to the written portfolio learning gained through work experience, independent study, and other experiences. Evidence of learning through documentation of experience, completion of a project, and written examination will be explained. If there is sufficient demand, a workshop will be conducted to assist students.
4. Fees:
  - Application Fee per Assessment: \$15.00
  - Assessment Fee: one-half the current rate of tuition per credit for each credit requested; to be paid when portfolio is submitted for evaluation.
5. The application will be submitted to the director of the Office of DLCE. Upon approval, the chairperson of the department offering the course will be requested to suggest the name of a faculty member to the dean of the college for approval.
6. The faculty member will meet with the student to determine the technique of assessment or a combination of techniques to be used, including interviews, documentation, observation of performance, examination, etc.
7. After the portfolio has been prepared by the student, it will be submitted to the director of the Office of DLCE for review, then forwarded to the appointed faculty member for assessment.
8. The faculty member will evaluate the portfolio, then make a recommendation for or against the award of credit and the amount of credit in the form of a letter, which must be approved and countersigned by the chairperson of the department offering the course. The portfolio will be forwarded to the dean of the college which oversees the student's curriculum to approve and verify that the course will be accepted as part of the student's program. Finally, the portfolio is sent to the director of the Office of DLCE, who will notify the student and the Registrar.
9. The Registrar will list the course title, credit, and an indication that credit was earned through Portfolio Assessment.

### Change of Major

For students changing majors (or minors) in the College of Education and Educational Technology or in the Eberly College of Business and Information Technology, special policies apply. Please refer to the individual college sections in this catalog for change of major policies pertaining to specific colleges and majors.

To qualify for change of major, a student must be in academic good standing (2.00 cumulative GPA) and must meet any other requirements specific to the new major. All teacher certification programs have requirements beyond a 2.00 GPA.

A student must apply for a change of major in the office of the dean of the new major. Before seeking a change of major, it is advisable that the student consult with the departmental chairpersons of both the "old" and "new" majors.

When a student changes colleges, the dean (or dean's designee) of the college of the new major will evaluate the student's credits before approving the change. A copy of the evaluation will be made available to the student and his/her new advisor if a change of major is effected.

In cases involving students who are veterans, the dean (or dean's designee) of the new major shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended time the change of major will entail, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the change. No change of major shall be made by veterans until V.A. approval has been assured.

### Advisory Program

A group of selected faculty members act as freshman advisors for entering freshmen in their departments. In some curricula the advisors continue with the same group of advisees from year to year. In other curricula the freshman advisors remain with their advisee groups only for the students' first year; under this program, the student is then assigned an academic advisor for the remaining years through to his/her degree in a chosen field. Faculty members advise students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and career options. Students may identify advisors by logging in to URSA ([www.iup.edu/ursa](http://www.iup.edu/ursa)) and selecting (1) "Student Services," (2) "Academic Records," and (3) "View Your Advisor." Having identified their advisors, students should contact the advisor. Should a student fail to identify an advisor, s/he may contact the chairperson of the student's major for an advisor assignment.

### Dual Baccalaureate Degrees

A student who has earned a minimum of 28 undergraduate credits from IUP and is in good academic standing may apply to pursue a second baccalaureate degree concurrently with the first. This application must be submitted to the dean of the college in which the major program of study for the second baccalaureate degree is housed. If admitted to a second baccalaureate degree program, the student must designate one of the two degree programs to be primary. To receive both degrees at graduation the student must earn at least 30 credits beyond the requirements of the designated primary program of study. The student must earn a minimum of 150 credits to receive both degrees concurrently.

Furthermore:

- a. The student may not be graduated until both the degrees are completed.
- b. All requirements for the curriculum of each degree must be satisfied.
- c. A course required in both degree programs does not have to be repeated for the second degree, but exceptions might apply at the departmental level.
- d. All university requirements such as a minimum GPA and number of residency credits taken at IUP in the major must be met for each degree separately.
- e. Should a student elect to discontinue the pursuit of receiving two baccalaureate degrees simultaneously and decide to apply for graduation with one degree, the student will be bound to the Postbaccalaureate Studies requirements if a later return to IUP is desired.

### Sophomore Screening for Junior Status Approval

General policy at IUP permits each college to determine its own scheme for evaluating the development and progress of its major students. However, each college is expected to employ some effective procedure for such evaluation.

Several of the colleges use a procedure called "Sophomore Screening for Junior Status Approval" with the following required: All students (in such a college) enrolled in their fourth semester or who will complete 60 credits attempted by the end of the current semester must apply for Junior Status approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisors to determine which colleges use the “Junior Status” screening procedure and the criteria for Junior Status Approval.

### University Policy on Semester Course Syllabi

Each faculty member shall prepare and distribute a semester course syllabus, without charge, to each student within one week of the first meeting of the class. The syllabus will be consistent with the course content and catalog description that was approved by the Curriculum Committee of the University Senate for the initial course offering or revision. Semester course syllabi may be distributed in hard copy or electronic versions. The semester course syllabus is a vehicle of communication to promote student academic planning and to avoid misunderstandings of the course plan and requirements.

It is recommended that each syllabus include:

- The faculty member’s name, office location, telephone number, IUP e-mail address, and office hours.
- An outline of the course content, objectives, and prerequisites, as appropriate.
- Information about any required textbook(s) with title, author, and edition, as well as any other required materials.
- Information on the determination of grades, including the weight, types, and scheduling of evaluations, other planned requirements, academic integrity, expectations for class participation, and attendance.
- A statement of policies and/or penalties for make-up exams and late submission of assignments.
- A statement addressing accommodations for students with disabilities.

### Undergraduate Course Attendance Policy

The university expects all students to attend class.

Individual faculty members may define attendance standards appropriate to each course and the consequences of not meeting those standards, within the following guidelines:

- Each policy must be distributed in writing during the first week of the course. Normally, it is expected that the information dealing with class attendance standards will be distributed with the course syllabus.
- Each policy must define some limited level of allowable absence.
- Each policy must recognize students’ need to miss class because of illness, personal emergency, or active military duty.
- Each policy must not penalize students who add the class during the regular or specified university drop-add period and must allow those students to make up work missed prior to adding the class.

### Anticipated Class Absence for University Representation and Participation

The university community recognizes the value of student participation in cocurricular and extracurricular activities of the university, while acknowledging the faculty member’s right to determine the terms of variance, if any, from the course syllabus.

The student must take the initiative to make all arrangements prior to class absence, including validation of participation as needed. Alternate arrangements to meet course requirements should be sought sufficiently in advance to permit faculty/student agreement on the plan for completion, whether the actual completion is rescheduled before or after the anticipated absence.

### Inclement Weather Policy

Indiana University of Pennsylvania is committed to the safety and security of its students, faculty, staff, and visitors. Therefore, the decision as to whether university classes or programs and events will be held during periods of adverse weather conditions is based on the overall concern for the university community.

The Office of Media Relations will submit and post information about class and event cancellations to the following sources and news agencies:

**IUP:** IUP website: [www.iup.edu](http://www.iup.edu); IUP Information Line, 724-357-7538

**Radio:** **WDAD-AM 1450; WCCS-AM 1160; U-92 FM 92.5** (Indiana, Punxsutawney, Greensburg); **WTAE-AM 1250** Pittsburgh; **KDKA-AM 1020** Pittsburgh

**Television:** **KDKA-TV, WTAE-TV, WJAC-TV, WPXI-TV**

**Newspaper:** *The Indiana Gazette*

Announcements will be made only if the university’s regular operation is disrupted. Announcements will not be made saying the university is open. The university’s Inclement Weather Policy and Procedures is available on <http://www.iup.edu/weatherpolicy>. Questions regarding the university’s Inclement Weather Policy may be directed to the Office of Human Resources, G-8 Sutton Hall, IUP.

If a decision is made by an event sponsor to cancel or postpone the function, the sponsoring unit/department assumes responsibility for notifying event participants of the cancellation/postponement in an appropriate and timely manner.

### Quality Points and Determining GPA

#### Grades and Quality Points

In the grading system, the following grades are used in reporting the standing of students at the end of each semester or session:

Grade	Description	Quality Points
<b>A</b>	<b>Excellent</b>	4 quality points/credit
<b>B</b>	<b>Good</b>	3 quality points/credit
<b>C</b>	<b>Average</b>	2 quality points/credit
<b>D</b>	<b>Passing</b>	1 quality point/credit
<b>F</b>	<b>Failing</b>	0 quality points/credit
<b>P</b>	<b>Passing</b>	0 quality points/credit (for credit courses only) (see policy explanation)
<b>S</b>	<b>Satisfactory</b>	0 quality points (for 0-credit courses only)
<b>U</b>	<b>Unsatisfactory</b>	0 quality points (for 0-credit courses only)

#### Other Designations (carrying no quality points):

<b>AUD</b>	<b>Audited Course</b>
<b>EXM</b>	<b>Examination</b>
<b>FOL</b>	<b>Portfolio Assessment</b>
<b>I</b>	<b>Incomplete</b> —For more information, see policy explanation.
<b>L</b>	<b>Late Grade/Continuing Course</b> —For more information, see policy explanation.
<b>OL</b>	<b>Other Location</b>
<b>Q</b>	<b>Total Semester Withdrawal</b> —Used prior to 2002 when a student had totally and officially withdrawn from the university for a given semester
<b>R</b>	<b>Research in progress</b> (graduate thesis/dissertation only)
<b>TR</b>	<b>Transfer</b>
<b>XMI</b>	<b>Exemption</b>
<b>W</b>	<b>Withdrawal</b> —For more information, see policy explanation.
<b>*</b>	<b>Grade not reported by instructor.</b> No grade information was reported by the end of the normal grading period

Grades followed by the following designations indicate the application of a policy which has amended the student’s cumulative grade-point average.

<b>.</b>	<b>Institutional Credit</b> (credit counts toward enrollment status but does not count toward graduation or in GPA calculation)
<b>..</b>	<b>Cancelled Semester</b> (see policy explanation)
<b>*</b>	<b>Fresh Start</b> (see policy explanation)

#### Determining GPA

Cumulative Grade Point Average (CGPA) is determined by multiplying the credits for a course by the quality points received for that course. Then, the total number of semester quality points for all courses is divided by the total number of credits attempted.

## Academic Honors

IUP recognizes academic achievement through Provost's Scholars, Dean's Lists, and graduation honors.

### Provost's Scholar

Provost's Scholars are recognized annually. At the start of the Fall semester, any undergraduate student who meets the following requirements is eligible to be named a Provost Scholar:

- A current junior with a minimum of 45 credits earned at IUP
- A cumulative GPA of 3.50 or higher
- Must not have received this award previously (recognition is given only once)

### Dean's List

Undergraduate students receive recognition on the Dean's List for each semester (or summer session cumulatively) in which they earn at least a 3.25 GPA based on at least 12 credits of graded (not P/F) undergraduate coursework, or a combination of graded graduate and undergraduate coursework.

### Graduation Honors

Traditional Latin honors are awarded at graduation to first bachelor's degree candidates with appropriate academic records. Calculation is based on all undergraduate credits and quality points earned at IUP. Graduation honors are not granted for second (subsequent) degrees. The distinctions are:

*Cum laude*—3.25 to 3.49 cumulative GPA

*Magna cum laude*—3.50 to 3.74 cumulative GPA

*Summa cum laude*—3.75 to 4.00 cumulative GPA

Non-Latin honors are awarded to associate degree candidates. The distinctions are:

*With Honor*—3.25 to 3.49 cumulative GPA

*With High Honor*—3.50 to 3.74 cumulative GPA

*With Highest Honor*—3.75 to 4.00 cumulative GPA

## Grading Policies

After each semester or session, a grade report will be available to each student at the University Records and Systems Assistant (URSA) at [www.iup.edu/ursa](http://www.iup.edu/ursa).

Quality points are not counted on credits from other schools, and a student transferring from another school earns quality points only on work taken at this university.

Institutional credits are associated with courses numbered below 100. Institutional credits do not apply to degree requirements for graduation but are used to determine enrollment status (full- or part-time), including financial aid and athletic (NCAA) eligibility.

### Audit Policy

All audited courses will be identified as such on the student's grade report and transcript. Work taken on an audit basis will not be graded and will not count toward the fulfillment of requirements for a degree to be awarded by IUP. Since credits attempted and quality points will not be awarded for audited courses, they will not affect the student's grade-point average in any way. Auditors will pay normal tuition and such other fees as may be required for the course.

To audit an undergraduate course, a person must be admitted to the university and have met course prerequisites. Students wishing to audit a course for which they registered should obtain a Course Audit Form from the office of the department offering the course. Students must first register for the course before filing a course audit form. All audit processing, including revocation of previously requested audit classification, must be completed during the regular drop/add period. Copies of the completed form are returned to the Registrar's Office, to the department chairperson, and to the student. Audit students have the same privileges as other students in all coursework. There is no limit on the number of courses which may be audited.

## Midterm Grade Report Policy

To help undergraduate students monitor their academic performance, faculty members will provide a warning to students with unsatisfactory performance at midterm. Each semester, the Registrar will establish and announce the dates for the window within which midterm grades may be posted by faculty members and read by students and advisors. Faculty members will assign a midterm grade of "D" (danger or potential failure) or "F" (failure) by using the University Records and Systems Assistant (URSA) at [www.iup.edu/ursa](http://www.iup.edu/ursa).

The midterm grade is an advisory grade and is not a permanent part of a student's academic history. It is not used to determine enrollment status, dismissal, or eligibility for financial aid, housing, or athletics.

### Pass-Fail Policy

A student may take courses on a pass-fail basis to a total of 15 credits throughout his/her university career. The student is limited to one pass-fail course in any given semester during the sophomore, junior, and senior years. All courses in the student's Liberal Studies program and courses that meet major and minor requirements are excluded from this prerogative. When scheduled, such a course shall be included in the student's normal course load for the semester.

The student must declare his/her intent to choose pass-fail in a specific course no later than six weeks after the beginning of the semester or the equivalent time span in a summer session. Once declared, this pass-fail option may not be revoked. Instructors will not be notified of the identity of pass-fail students in their courses. The grade given by the instructor will be translated to a "P" or "F" during grade processing.

A student shall be given academic credit without quality points for a course taken pass-fail upon receiving a passing mark in the course. The credits successfully completed under pass-fail ("passed"), within the overall 15-credit limitation, shall be recorded as counting towards the total credits earned for graduation but not towards the credit-attempted data used in the calculation of the cumulative grade-point average. However, if a student fails a pass-fail course, he/she will receive the "F" grade and the corresponding grade-point average. An "F" earned under the pass-fail option may be repeated only under the graded option to provide the quality points to correspond to the "hours attempted" incurred with the "F."

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

**Exceptions:** Currently, there are two courses which are exceptions to the Pass-Fail Course Policy. EDUC 389 and NMDT 434 are only offered on a pass-fail basis.

### I (Incomplete) Policy

The designation of "I" is used to record work, which so far as covered, is of passing grade but is incomplete because of personal illness or other unavoidable reason. Changes of grade to convert designations of "I" must be received in the Office of the Registrar no later than the final day of classes in the next regular (fall/spring) semester after the designation was assigned. If the faculty does not change the "I" designation using a Change of Grade Form, it will be converted to an F.

In rare circumstances the student and/or faculty member may ask for an extension of the deadline. In this event, the dean of the college in which the course is taught may approve the extension, providing the faculty member concurs. To monitor designations, the registrar shall submit to department chairs routine semester reports of outstanding "I" designations.

### Procedure

A faculty member assigning the "I" designation must complete an Incomplete Grade Form with the dean's office indicating the work to be completed, deadlines for completion (it is not necessary to permit the maximum allowable time), and guidelines to establish a final grade. Copies of the completed form will be sent to the department chairperson, the dean of the

college in which the course was taught, and the student receiving the “I” designation.

Upon completion of the coursework, or notification by the student that the coursework will not be completed, the faculty member must submit a Change of Grade Form to indicate the final course grade.

*Receiving an “I” designation in a course means that the course does not satisfy prerequisites.*

### **L (Late Grade, Continuing Course) Policy**

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The designation of “L” (Late grade, continuing course) is appropriate for cases in which student work is expected to extend beyond a given semester/session. The designation of “L” is not to be confused with a designation of “I”, which is only appropriate for individual students unable to complete their coursework because of unexpected illness or personal emergency. “L” designations are appropriate for:

- a. Internships, practicums, field experience courses, workshops, and independent studies that, by design, extend beyond the normal end of the grading period.
- b. Others as approved by the department chairperson and the dean of the college in which the course is taught. If a specific course is always eligible for “L” designations, the dean may grant standing approval for “L” designations every time the course is offered.

Faculty wanting to use the “L” option for eligible courses must notify the Registrar two weeks prior to the end of classes so that the grades can be pre-entered. “L” designations which are not precoded may be given only with the permission of the department chairperson and the dean of the college in which the designation is awarded.

Instructors will convert “L” designations to letter grades at the end of the course. Unless an extension is obtained from the dean of the college in which the course was taught, an L designation unresolved at the end of one year will be converted to an F.

To monitor “L” designations, the Registrar shall submit to each faculty member routine semester reports of all outstanding “L” designations awarded by that faculty member. The purpose of these reports is to help inform faculty as they help students complete their coursework.

*The “L” designation is considered as having met the prerequisite for subsequent course enrollments.*

### **Grade Change Policy**

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Once earned grades have been recorded, they may be changed only in the case of clerical and/or calculation error or in the event of a successful grade appeal. It is not appropriate to change a grade based upon options, such as supplemental assignments, that are not equally available to all students. The deadline for corrections of clerical and/or calculation errors is the end of the next regular (fall/spring) semester after the grade has been awarded.

### **Course Repeat Policy**

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A student may not normally repeat an academic course. Exceptions to this policy are:

1. **Repeatable courses:** Certain courses are eligible for repeat for credit and grade. These courses are advanced art studio courses, music ensembles, special topics courses (281, 481) if the topic is different, and other specifically designated courses.
2. **D and F grades:**
  - a. Repeat with replacement: Undergraduate students are permitted to replace the grades and quality points in the GPA calculation for courses in which they receive a D or F grade by repeating that course at IUP and filing a repeat form with the Registrar’s Office. A total of six repeat-with-replacement attempts are permitted for undergraduate students. A single course can be repeated a maximum of two times. Additional course repeats are permitted with approval through the office of the dean of the student’s college. The most recent grade (regardless of whether it is higher or lower) will be the grade used in the GPA calculation. However, the transcript continues to document all academic work, and repeated courses are not deleted from the visual record.

- b. Course transfers: Students seeking to replace or average D and F grades must repeat these courses at IUP. If an IUP course in which a student received an F is repeated at another institution, the credit will transfer to IUP, but the original F will continue to count toward the IUP GPA. If an IUP course in which a student received a D is repeated at another university, neither the grade nor the credit will transfer.
  - c. Postbaccalaureate students (Undergraduate): Courses taken during prior undergraduate study at IUP may not be repeated with replacement.
3. **Other grades:** Courses in which students earned a grade of A, B, C, or P may be repeated only on an audit basis. New grades will not be assigned and additional credit will not be awarded.

This policy also applies to transfer credit. Students receiving transfer credit for an IUP course may not repeat that course at IUP. Similarly, students who have already earned a passing grade in an IUP course may not subsequently receive transfer credit for that same course.

### **Cancelled Semester Policy**

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The Cancelled Semester Policy provides for cancellation from the cumulative record of the effects of **one semester below a GPA of 2.00** for the purpose of helping a student improve academic standing. The student must have been separated from the university for two calendar years.

*Semester to be cancelled* refers to any semester of enrollment, whether full- or part-time. Students may elect to use an enrolled summer as their “semester” to be cancelled. The entire summer of any given year will be treated as a semester for the purpose of cancellation of grades. *Cancellation* removes the mathematic effect of all grades (passing, failing, withdrawals) from the semester, but there is no abridgement of the transcript. All courses and original grades remain visible on the official transcript; credit toward graduation remains for those credits associated with passing grades.

A student readmitted under this policy must meet current degree requirements and will be reviewed under current academic standards requirements applicable at the time of readmission.

This policy may be invoked only once in a student’s undergraduate enrollment in the university. While readmission may be based on the application of the cancelled semester, the transcript record will reflect this only after the student is enrolled and attending IUP. It is not a tool to qualify for transfer to another institution.

The student must apply to the college of which he/she was a member at the time of last enrollment. If a student wishes to enter a major in a college other than the one from which he/she was separated, he/she will apply to the original college, which will forward the application and related records to the new college for action. The college will inform the Office of the Registrar if the application is approved. Authorization for registration will come from that office.

### **Fresh Start Policy**

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A student who has been separated from the university for a minimum of three consecutive calendar years and has been readmitted may apply for a Fresh Start from the appropriate college dean or designee. Having reviewed the prior and intervening factors for evidence of potential for improved academic success, the college dean or designee may implement this policy.

This policy may be applied only once. For a first bachelor’s degree, a minimum of 30 credits must be completed at IUP after a student returns to IUP under this policy. For a first associate’s degree, a minimum of 15 credits must be completed at IUP after a student returns to IUP under this policy.

A student who wishes to enter a major in a college other than the one from which he/she was dismissed will apply to the original college, which will forward the application and related records to the new college for action.

**Conditions for a Fresh Start Record:** All credits and grades for IUP coursework taken prior to readmission under this policy shall remain on the transcript. Upon readmission, a new cumulative (GPA) is established based upon credits and grades earned from the date of readmission.

**Prior Record:** Previously accepted transfer credits and IUP courses in which grades of C or better were earned prior to readmission will be reviewed in terms of appropriateness (applicability, timeliness) to the new degree. Those courses, approved by the college dean or designee, will be counted as credits earned and applied toward graduation in the manner of transfer credits.

**Academic Standards:** A student who is readmitted under the provisions of this policy shall be required to meet current degree requirements. He/she shall be academically reviewed under the policies published in the academic catalog at the time of readmission. A student readmitted under this policy waives the right to exercise the cancelled semester policy.

## Withdrawal Policies

### Individual Course Withdrawal Policy

The Individual Course Withdrawal Policy provides students who are unable to complete a course with the option of withdrawing from that course. This option should be taken only after other options have been discussed with the instructor and/or the student's advisor.

During the fall and spring semesters, Individual Course Withdrawals may be processed using URSA (University Records and Systems Assistant) between the day after the conclusion of the drop/add period and the end of the first two-thirds of the academic term, or part-of-term. During summer parts-of-term, the deadline is the two-thirds point of each summer course for which the student is registered. After the two-thirds point of each semester or summer part-of-term, students may no longer process Individual Course Withdrawals.

A student needing to withdraw from a course after the deadline must process a Request for Exception to Course Scheduling Deadlines through the office of the dean of his or her college. Approval of the waiver is contingent upon documentation of catastrophic circumstances preventing the student from completing the semester. If a waiver is approved, the college office will arrange for recording the "W" designation.

Since instructors inform students of their unsatisfactory performance in class prior to the two-thirds point of the semester (Midterm Grade Report Policy), students will be able to discuss course withdrawals with instructors and/or academic advisors to assess alternatives. Students should be aware of the potential impact of course withdrawal on financial aid eligibility (percent of completion and eligibility to move to the next class level), athletic eligibility, and health insurance that require full-time status. Students are also cautioned to consider the detrimental impact of "Ws" in a transcript review by a prospective employer or graduate school.

### Total University Withdrawal Policy

The Total University Withdrawal policy provides students who are unable to complete a semester with the option of withdrawing from all classes, and thus from the university, for that semester. During the fall and spring semesters, Total University Withdrawals may be processed between the first day of classes and the end of the eleventh week of the semester. During summer parts-of-term, the deadline is the two-thirds point of each summer course for which the student is registered. Questions about academic impact of withdrawal should be directed to the Advising and Testing Center (see "Process" below). Questions about the financial impact of withdrawal should be addressed to the Office of the Bursar and/or the Office of Financial Aid.

**Late Withdrawal:** Any undergraduate student who needs to withdraw from the university after the deadline must process a waiver through the office of the dean of his or her college. Approval of the waiver is contingent upon documentation of catastrophic circumstances preventing the student from completing the semester or summer part-of-term. Approved waivers must be submitted to the Advising and Testing Center and attached to the Total University Withdrawal form for processing as below.

**Involuntary Withdrawal:** Any undergraduate student involuntarily withdrawing from the university as a result of suspension or expulsion unrelated to violations of the Academic Integrity Policy will automatically

have the designation of "W" assigned to each registered course as a result of such judicial action.

**Process:** Undergraduate students voluntarily withdrawing from the university during the fall, spring, or summer semesters should first review information on withdrawals on the Advising and Testing website ([www.iup.edu/advisingtesting](http://www.iup.edu/advisingtesting)). Then they must process a Total University Withdrawal either via the Web ([www.iup.edu/ursa](http://www.iup.edu/ursa)) or by form completion with the Advising and Testing Center, Pratt Hall, 724-357-4067 (V/TD; [advising-testing@iup.edu](mailto:advising-testing@iup.edu)). Once the Total University Withdrawal has been processed, a withdrawal designation ("W") will be assigned to all registered courses in the semester from which the student is withdrawing.

**Readmission:** Students should refer to the Readmission Policy in the Admissions section of this catalog for further information about returning to IUP.

### Withdrawal from IUP and Its Impact on Student Financial Aid

Students taking a total university withdrawal from all of their courses at IUP may find their financial aid for that particular semester affected. The 1998 Reauthorization of the Higher Education Act requires educational institutions to calculate a Return of Federal Student Aid Funds (Title IV aid) for students who withdraw from all classes on or before the 60 percent attendance point in the semester. A pro-rata schedule is used to determine the percentage of the semester attended; that percentage determines the amount of federal funds earned. The Office of the Bursar applies the federal guidelines and returns the unearned portion to the federal programs in the following order: 1) Unsubsidized Federal Direct Stafford Loan, 2) Subsidized Federal Direct Stafford Loan, 3) Federal Perkins Loan, 4) Federal Direct PLUS Loan, 5) Federal Pell Grant, and 6) Federal Supplemental Educational Opportunity Grant.

Example: If a student withdrew on the 32nd calendar day of a semester which encompassed 106 calendar days (not including breaks of five or more days), the student would have attended 30 percent of the semester. Therefore, the student would have earned 30 percent of his federal aid.

In addition to impacting current eligibility, a total withdrawal can affect future eligibility for financial aid. Please refer to the section regarding satisfactory academic progress.

## IUP Policy for Enrolled Students Called to Active Military Service

IUP provides two options for students who are currently enrolled but called to active military duty before the end of the semester:

### Option 1

The student may choose to do a total semester withdrawal from all his/her classes, and under a Pennsylvania State System of Higher Education policy, receive a full refund for tuition and fees; any university room and dining hall contract fees would be refunded on a prorated basis for the actual services the student has received up to the date of the withdrawal. This option requires that the student withdraw from every course and receive no grade for any course taken in that semester.

To process a total semester withdrawal, undergraduate students must contact the Advising and Testing Center, 216 Pratt Hall, 724-357-4067, ([www.iup.edu/advisingtesting](http://www.iup.edu/advisingtesting) or e-mail at [advising-testing@iup.edu](mailto:advising-testing@iup.edu)) to complete the necessary paperwork to assign the course withdrawal designations and to start the process for refunds; graduate students must notify the School of Graduate Studies and Research, 101 Stright Hall, 724-357-2222 ([www.iup.edu/graduate](http://www.iup.edu/graduate)).

Any student who has elected to use this option shall be granted readmission for the next semester in which the student wishes to return to IUP. The student's academic standing at the time of readmission shall remain as it was prior to the call to active military duty.

For federal student aid recipients, the return of Title IV student aid will be applicable.

## Option 2

If a substantial part of the semester (typically two-thirds to three-quarters of the semester) has been completed by the time the student is called for active military duty, he/she may meet with each instructor to determine an appropriate grade. Since assignment of grades is the responsibility of the instructor, he/she may assign whatever grade is appropriate. If the appropriate grade is an "incomplete," IUP will extend the deadline by which the incomplete must be removed to *180 days from the time the student returns from active duty*. Any university room and dining hall contract fees would be refunded on a prorated basis for the actual services the student has received up to the date of leaving the university for active duty.

Undergraduate students must contact the Advising and Testing Center to complete the necessary paperwork to start the process for refunds; graduate students must notify the School of Graduate Studies and Research.

Any student who has elected to use Option 2 who wishes to return to IUP must contact the Registrar's Office to have his/her status reactivated.

Questions may be addressed to the Registrar's Office, 300 Clark Hall, 724-357-2217 ([www.iup.edu/registrar](http://www.iup.edu/registrar)).

## Academic Standards Policy

A. **Purpose:** The university establishes minimum standards for cumulative grade point average (CGPA) to encourage academic accomplishment and timely progress toward graduation.

This policy applies to all undergraduate students. Designated subpopulations are subject to modifications listed in Section F.

### B. Definitions

1. *Academic Good Standing:* Students maintaining a CGPA of at least 2.00 are in Academic Good Standing.
2. *Probation:* Students whose CGPA falls below the 2.00 standard are on probation during the next fall, spring, or summer semester for which they are registered.
3. *Extended Probation:* Students who have been authorized to continue, even though they have not achieved a 2.00 CGPA after one semester of probation, are on extended probation.
4. *Academic Recovery Plan:* Students whose CGPA falls below the 2.00 standard must develop an Academic Recovery Plan for achieving academic good standing.

### C. Administrative Review and Enforcement of Standards

1. Each college, regional campus, and the Department of Developmental Studies will designate an Academic Standards Officer who will be responsible for academic review and enforcement of standards.
2. An academic review is conducted at the end of each fall, spring, and summer semester.
  - a. Students earning a 0.00 CGPA at the end of their first semester of full-time enrollment will be dismissed from the university.
  - b. Other students falling below the 2.00 CGPA standard will be continued on probation for one semester and be required to develop and implement an Academic Recovery Plan.
  - c. Students still below the 2.00 cumulative GPA standard after a semester of probation are subject to dismissal. The Academic Standards Officer may grant one semester of extended probation to those who (1) made progress toward academic good standing while on probation or followed their approved Academic Recovery Plan, and (2) have a reasonable mathematical chance of reaching a 2.00 CGPA after one additional semester. Other probation students will be dismissed.
  - d. Students still below the 2.00 CGPA standard after a semester of extended probation will be dismissed.
  - e. Students who regain academic good standing but again fall below the 2.00 CGPA standard in a subsequent semester are awarded another semester of probation and, where appropriate, extended probation.

D. **Academic Recovery Plan:** Students not meeting the 2.00 CGPA standard must design and implement a comprehensive plan leading to

academic good standing. The plan must be developed with and approved by the appropriate Academic Standards Officer.

1. **Analysis:** Students must identify the factors causing their unsatisfactory achievement.
2. **Planning:** Plans must include a schedule of minimum grades needed to achieve academic good standing.
3. **Commitment:** Students must commit to the changes in behavior necessary to achieve academic success. This might include changes in time management, career exploration, and the use of such support services as academic advisors, tutoring, the Writing Center, the Counseling Center, the Department of Developmental Studies workshops on study skills and related activities, and any other opportunities deemed important by the Academic Standards Officer.
4. **Documentation:** Each plan must include a satisfactory method of documentation. Records of attendance at classes and support services, journaling of activities supporting academic success, and conferences are potential vehicles to be considered.

### E. Dismissal and Readmission

1. Students dismissed under this policy may not be readmitted for at least one calendar year.
2. Dismissed students are not eligible for enrollment in any session (including summer sessions) for at least one calendar year. After one calendar year dismissed students may enroll in summer courses, but they are cautioned against enrolling without consulting their Academic Standards Officer.
3. Dismissed students may, after one calendar year, apply for readmission through the Office of the Registrar.
  - a. Those students who, in the opinion of the appropriate Academic Standards Officer, are likely to achieve academic success may be readmitted.
  - b. Decisions for readmission of students in university probationary or dismissed status, regardless of whether the student was dismissed by the university or the student voluntarily withdrew, are the responsibility of the Academic Standards Officer of the college the student wishes to enter. If the student is seeking admission to a new college, the officer of the new college will consult with the officer of the former college before making a decision. The Registrar's Office will officially change the major based on the officer's readmission letter to the student.
4. Students may be readmitted only once under this policy. Subsequent readmission may be available under the Cancelled Semester Policy after two or more years of separation or the Fresh Start Policy after three or more years of separation.

### F. Special Populations

1. **Department of Developmental Studies/Act 101 Program:** Students admitted through the Department of Developmental Studies remain under the direction of the Department of Developmental Studies until reaching the 2.00 CGPA standard. Students dismissed after earning a 0.00 CGPA in their initial Department of Developmental Studies/Act 101 program may apply for readmission only to the next Department of Developmental Studies/Act 101 program.
2. **Regional Campuses:** Students admitted through a regional campus must remain at that campus until reaching the 2.00 CGPA standard.
3. **Part-time Students: Continuing Education and Others:** This policy will be applied on a pro-rata basis for part-time students. Students are considered to be part-time if, at the close of the drop-add period of the given semester, they are enrolled in fewer than 12 credits of classes.

## IUP Student Grade Appeal Policy

### Grade Review Policy

If a student disagrees with the evaluation of his/her work by the instructor but has no basis for a charge of "discrimination" or "capricious evaluation" or "error," the student should discuss the matter directly with the instructor, and if unsatisfied, with the chairperson of the department in which the course was offered, and if still unsatisfied, with the dean of the college in which the course was offered. In such cases, the decision of the instructor shall be final.

If a student believes that an improper grade has been assigned, an appeal may be filed on the following grounds:

1. **Discrimination:** On the basis of race, religion, national origin, sex, age, ancestry, handicapped status, gender identity, sexual orientation, or political affiliation.
2. **Capricious Evaluation:** Significant and unwarranted deviation from grading procedures and course outlines set at the beginning of the course (ordinarily in a written statement during the first week of the course) or grade assigned arbitrarily on the basis of whim or impulse. The student may not claim capriciousness if he or she disagrees with the subjective professional evaluation of the instructor.
3. **Error:** Demonstrable, objective determination that a mathematical or clerical error resulted in the entry of an incorrect grade.

## Procedures of Appeal

### Level I: Informal Resolution

Every effort should be made to resolve the disagreement at Level I. The student must first seek a resolution to the disagreement with the instructor either in person or in writing. If the student is not satisfied with the results, the student must then speak with the chairperson of the department that offers the course. If still unsatisfied, the student must discuss the matter with the dean of the college in which the course is offered. A Student Government Association member may accompany and advise the student during the Level I procedures. Only after all attempts for resolution at Level I have been exhausted may the student initiate Level II.

### Level II: Appeal Screening

- A. **Composition:** Each year there shall be appointed a Grade Appeals Committee to determine the existence of the substantive basis for appeal. The committee will be composed of seven voting members: three faculty members appointed by APSCUF, three members elected by and from the Senate Academic Committee (one faculty, one administrator, one student), and one student appointed by the Student Government Association. A quorum consists of a majority of the committee. To take action, a majority of those present must be faculty members. If a quorum of the Level II committee is not available to meet within the designated time limits, the Provost's Office will seek additional members from the appointing bodies. If these bodies are unable to respond in a timely manner, the Provost's Office may select additional members from the appropriate groups.
- B. **Procedure to Initiate Appeal:** To initiate Level II of the appeal, the student must file an appeal form with the Provost's Office. This form must be filed within sixty (60) calendar days of the beginning of the semester immediately following the semester in which the grade was received. The Provost's Office may extend the sixty-day limit only in unusual circumstances when equity demands it and when the student's own procrastination or misunderstanding did not substantially contribute to the delay. (Note: Grade appeals will not generally be processed during the summer. Therefore, the appeal of any grade received in the spring or summer sessions normally will be processed in the fall. A review will be scheduled in the summer only when the student's academic eligibility is jeopardized by the grade in question or when the student is a graduating senior.) The Provost's Office will notify the appropriate dean, department chairperson, faculty member, APSCUF president, and the Student Congress president of the student's initiation of the Level II process.
- C. **Procedure to Process Appeal:** The student will be expected to submit written documentation of his/her complaint, and the faculty member will be expected to submit in writing the course grading procedure and any other pertinent information. Appeals based on discrimination will be reviewed according to current standards of nondiscriminatory action. Appeals based on capriciousness will be reviewed in light of the faculty member's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuance. Denial of appeal continuance must be by a negative vote of four members of the committee. This committee will inform the Provost's Office of its findings. Within five (5) class days of the receipt of the committee's report, the provost or designee will notify the student and the faculty member of the findings. If the basis for appeal is determined to be substantive, the provost or designee will schedule a Grade Review Panel

within fifteen (15) class days to be convened prior to the conclusion of the semester.

### Level III: Appeal Review

- A. **Composition:** The Grade Review Panel will consist of five voting members: one academic dean or associate dean and four faculty members. The Student Congress Executive Committee designee may advise as requested by the student. The affirmative action officer will advise in appeals based on discrimination. The panel will be constituted from the Grade Review Pool by random selection. The panel chairperson will be elected by and from the panel before each review.
- B. **Membership:** The Grade Review Pool will be established in the spring term to serve for the following academic year. Using random selection methods, the pool and rotational order within the pool will be established by the Provost's Office. A pool of three deans or associate deans and twelve full-time faculty members will be maintained. In establishing the membership for each review panel, prior to each review the names of those designated as primary members of the specific panel and available as alternates will be supplied to all parties involved. A panel member may request (to the provost or designee) disqualification due to a conflict of interest. The student and the faculty member may eliminate names in proportion to the composition of the panel. Each may eliminate only one dean/associate dean and four faculty members. The instructor and the student will be supplied a list of all primary and secondary pool members. The opportunity to disqualify panel members will take place only once. Resulting vacancies will be filled from the appropriate pool of alternates so that the panel will be composed of one dean/associate dean and four faculty members. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Provost's Office will supplement the pool using appropriate random selection methods.
- C. **Procedure:**
  1. Both the student and the instructor will have the right to appear before the panel, present witnesses, and offer evidence. In addition to those specified in Level III, Section A, each may also bring one observer, with whom he or she may consult but who may not participate in the review.
  2. The panel shall determine its rules of order for internal operation. After hearing the evidence brought forth, the panel will privately deliberate and render a decision. If the grade appeal is upheld, the panel will constitute a committee of three appropriate faculty members (knowledgeable in the discipline but excluding the faculty member against whom the complaint was lodged), who will review the student's work and recommend the appropriate grade or suitable remedy. The panel will incorporate this information in its determination, which it then forwards to the Provost's Office for implementation, ordinarily within thirty days. The Provost's Office will initiate the processing of grade changes resulting from Level III decisions. The Provost's Office will notify the student of grade changes resulting from Level III decisions.
  3. The written report sent to the Provost's Office will state whether the student's appeal is upheld or denied; if upheld, the committee's evaluation and remedy will be included. Both the student and the faculty member have the right to review all documents related to the appeal. All documents supporting the report will be sealed and kept for one year to ensure the appropriate action is taken before they are destroyed or returned to the individual presenting the evidence.
  4. The Level III decision is final for all involved parties.

### Ancillary Provisions

- A. **Continuing Rights:** This appeal does not supplant any legal rights afforded by the Commonwealth of Pennsylvania and/or the Government of the United States. Nothing in this policy abrogates or modifies any provisions of or rights under the Collective Bargaining Agreement.
- B. **Discrimination in this policy generally means unlawful discrimination.** To the extent that any form of discrimination identified in this definition is not unlawful discrimination, this definition shall not be taken to create a cause of appeal against the university. In such cases, the final appeal procedures stated in this policy will be final and binding on the student.

### C. **Tenure and Promotion Committee Membership on Grade Appeals Committees:**

Members of the universitywide tenure and promotion committees may not serve concurrently on grade appeals committees.

D. **Support Mechanism:** The Provost's Office, after consultation with the Senate Academic Committee and APSCUF, will be responsible for identifying a pool of at least ten faculty members well versed in the preparation of grade appeals who will be available upon request to help students or faculty prepare documentation for the grade appeals process.

E. **Training/Support:** The Provost's Office will offer yearly information sessions/workshops to assist deans, chairs, grade appeals panel/committee members, and members of Student Government Association/university in identifying issues and to provide guidance for the resolution of grade appeals.

F. **Dissemination of Grade Appeal Information:** The Provost's Office will annually report to the university community a statistical summary of grade appeal data that does not compromise confidentiality including (1) the number of appeals filed, (2) the resolutions at levels II and III, and (3) the final implementation of Level III decisions.

G. **Appeals on Procedural Grounds:** Decisions may not be challenged merely because the Provost's Office fails to comply with Ancillary Provisions D, E, or F above.

H. **Intentional Misrepresentation:** Intentional misrepresentation in the filing of grade appeals by students will be referred to the university judicial system for students. Intentional misrepresentation by faculty in the grade appeals process will be referred to the Provost's Office.

I. **Confidentiality:** Students, faculty, administrators, and staff involved in processing and hearing grade appeals must respect the confidentiality of all aspects of these proceedings. Those breaching confidentiality subject themselves to possible disciplinary action. This shall not abridge the First Amendment rights of the student appellant nor the instructor against whom the appeal has been filed.

J. **Intended Purpose:** The grade appeal procedures are designed simply as a means to resolve differences between students and faculty related to grading. Unless there is intentional misrepresentation, the results of a grade appeal may not be used for disciplinary action of personnel.

K. **Faculty Compensation:** If a Review Panel (hearing) is scheduled at a time in the summer when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.

L. **Review of Policy:** Every five years the Senate Academic Committee will review, in consultation with the campus community, the operation of the Grade Appeals Policy and recommend changes deemed appropriate.

M. **\* Amendment:** Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss.

**\*Note:** In the amendment process above, specification of University Senate implies the Council of Trustees' role in approving Senate actions and recognizes the Council of Trustees' final action to change policy.

## Academic Integrity Policy and Procedures

I. **Academic Integrity Policy and Procedures.** The university's academic integrity policy is part of an ongoing effort to develop a community where trust, honesty, ethical principles, and personal integrity guide interactions with others, thereby providing for orderly academic and scholarly processes. The following policy and procedures have been established to preserve the academic integrity of the university community, while also providing a process that provides opportunities for students to respond to allegations that the policy has been violated.

### II. Policy

A. **Types of Violations.** Violations of academic integrity include, but are not limited to, the following:

1. Providing or receiving unauthorized assistance in coursework; with lab work, theses, and dissertations; or during examinations (including qualifying and comprehensive exams) or quizzes.
2. Using unauthorized materials or devices, such as crib notes, during examinations or quizzes.

3. Plagiarizing papers, theses, dissertations, essays, reports, speeches and oral presentations, take-home examinations, computer projects, or other academic exercises by misrepresenting or passing off the ideas, words, formulas, or data of another as one's own. Plagiarism is dishonest and illegal. Writers are indebted to authors from whom they borrow exact words, ideas, theories, opinions, statistics, illustrative material, or facts (beyond common knowledge). Writers are also indebted if they summarize or paraphrase in their own words material from sources. All quoted material requires the acknowledgment of the source by the use of quotation marks or indentation (if exact wording is incorporated). In addition, both directly quoted and summarized material must be acknowledged by use of a note or parenthetical citation that indicates the author and/or date of publication and page number or numbers. If the writer indents a quotation, it must be clearly set off from the body of the text and must be documented in the aforesaid manner. To verify the various documentation procedures, writers should consult the style sheet in the particular discipline for which they are preparing the assignment (MLA, APA, Chicago, BC, etc.).
4. Using the same paper or work more than once without authorization of the faculty member to whom the work is being submitted.
5. Possessing course examination materials before the administration of the exam, without the prior knowledge or consent of the instructor.
6. Intentionally evading IUP academic policies and procedures, for example, improperly processing course withdrawals, grade changes, or other academic procedures.
7. Falsifying information, including falsification/fabrication of research data and/or statistical analyses, forging signatures on various forms and documents, or altering or adding answers on academic exercises or exams after work has been graded.
8. Computer dishonesty as addressed by university computing policies including, but not limited to: using or attempting to use computing accounts or other information for which the student is not authorized; providing false or misleading information to obtain a computing account or access to other information resources; attempting to obtain information resource access codes (usernames, passwords, PINs, etc.) for another user's computing accounts; sharing information resource access codes (usernames, passwords, PINs, etc.) with other individuals; attempting to disguise the identity of a computing account or other information resource; using or attempting to use university network resources to gain or attempt to gain unauthorized access to remote computers including, but not limited to, port scanning; violating the terms of intellectual property rights, in particular software license agreements and copyright laws; using information resources to monitor another user's data communications or to read, copy, change, or delete another user's files or software without permission of the owner; using or installing or attempting to use or install software not properly licensed.
9. Noncompliance by failure to comply with previously imposed sanctions for academic violations under this policy.
10. Class behavior which significantly disrupts the learning process or is a threat to others.
11. Buying, selling, stealing, or engaging in unauthorized exchange of, or improperly using, any assignments, papers, or projects.
12. Making fraudulent claims to gain academic credit or to influence testing or grading.

The university reserves the right to discipline any student for the above policy violations and any other action that an ordinary, reasonable, intelligent college student knows, or should know, might lead to the issuance of discipline. This means the university maintains the right to issue discipline for reasonable cause.

Charges of academic integrity violations may be brought by a faculty member or administrator. Students who observe or become aware of a violation of academic integrity by another student are strongly encouraged to report it to a university official. A faculty member/administrator who believes that



a student has violated an academic policy may elect to resolve the matter by Informal Resolution, by Documented Agreement, or by Formal Adjudication. *Sanction(s) may not be imposed upon a student believed to have violated an academic policy without following one of these three procedures.*

If charges are brought, the accused student shall have a fair and reasonable opportunity to answer, explain, and defend against the charges. The university shall have the burden of proof in all cases.

### III. Procedures

A. **Options for Resolution.** A faculty member or administrator must use one of the following options to resolve alleged violations of academic integrity:

1. **Option I: Informal Resolution.** The faculty member/administrator shall notify the student of the charges and schedule a meeting within ten calendar days of the observation or discovery of the incident and agree at such meeting to resolve the issue without submitting any formal documentation. If the violation pertains to work being judged or that has been judged by a committee (examples might include dissertations, theses, and comprehensive examinations, both oral and written), the meeting must involve a majority of the committee and the resolution must be agreed to by a majority of the committee. It is in the interest of the faculty member/administrator and student to complete a statement that summarizes the incident, meeting, and agreed-upon resolution. The factual statement should be signed by both parties and copies provided to the student and the faculty member/administrator. By resolving the charges informally, the student waives his/her right to appeal sanctions which have been agreed upon in the resolution process. If agreement cannot be reached, or if, at the discretion of the faculty member/administrator, a more formal process as outlined in this policy is appropriate, the formal process will be initiated by the faculty member/administrator. No formal record is kept if the case is satisfactorily resolved at this level.

2. **Option II: Resolution by Documented Agreement**

- a. If no resolution is reached under Option I, or if the faculty member/administrator deems this step to be more appropriate, the faculty member/administrator will schedule a conference with the student in an attempt to reach a mutually agreeable resolution. This conference must be scheduled/requested within ten calendar days of the observation or discovery of the alleged violation or of the failure to resolve through Option I. If an agreement is reached, the faculty member/administrator must complete a Documented Agreement Referral Form outlining the agreement and have it signed by both parties: faculty member/administrator and student. If the violation pertains to work such as a thesis or comprehensive examination being judged or that has been judged by a committee, the conference must involve a majority of the committee and the Documented Agreement Referral Form must be agreed to and signed by a majority of the committee and the student. Copies are distributed to the student, the faculty member/administrator filing the agreement, the department chair, and the Office of the Provost. The Office of the Provost will file the official documents with the Office of Student Conduct. The form must be filed within ten calendar days of the conference.
- b. By signing the agreement, the student waives the right to appeal the sanctions agreed upon in the conference. If the student fails to fulfill the written agreement, the faculty member/administrator may file an academic integrity referral against the student for noncompliance.
- c. If a prior academic integrity violation for the student is on record, the matter will be referred to an Academic Integrity Board (see section D, Multiple Violations).
- d. If a documented agreement is not reached, the faculty member/administrator shall initiate the formal adjudication process by filing an Academic Integrity Referral Form with the department chair, within ten calendar days of the conference with the student.

3. **Option III: Resolution by Formal Adjudication.** A faculty member/administrator should pursue formal adjudication if:

- he/she cannot reach, or chooses not to attempt, a mutually agreeable resolution with the student regarding the facts of the case or sanctions to be imposed
- he/she believes that the violation is so severe that it warrants the following sanctions:
  - \* awarding a failing grade on a project or exam (such as a graduate qualifying for a comprehensive exam or dissertation) when resubmitting the project or retaking the exam is not possible
  - \* involuntary withdrawal from part of IUP's academic or other programs
  - \* suspension
  - \* expulsion
  - \* rescission of a conferred degree
- a. The faculty member/administrator should file an Academic Integrity Referral Form with the department chair, within ten calendar days of the observation or discovery of the violation or within ten calendar days of the failure to reach a resolution through Option I or Option II. If the violation pertains to work being judged by a committee, the form must be signed by a majority of the committee. The form will contain a description of the alleged violation, including the time, date, and place of occurrence, and the recommended sanction if the student is found to have violated this policy.
- b. The department chair will forward a copy of the Academic Integrity Referral Form to the student, within ten calendar days of receiving notification of the allegation, and contact the student to schedule a hearing to review the facts surrounding the allegation and recommended sanctions if the student is determined to have committed a violation.
- c. The hearing should be scheduled so as to allow the student a reasonable time to prepare a defense (within ten calendar days of being notified of the allegation by the department chair).
- d. This hearing will involve the student, the department chair, and the faculty member/administrator, and in the case of a graduate student, the dean of the School of Graduate Studies and Research (or dean's designee); all parties may invite others with pertinent information. The student and the faculty member/administrator must be given the opportunity to submit and review written, physical, and testimonial evidence, and to question witnesses.
- e. The accused student may identify an advisor, who may be an attorney, to be present at the hearing. The advisor may only consult privately with the student.
- f. The student may waive his/her right to a hearing in writing. If so, the sanction recommended by the person filing the referral will be imposed unless the sanction is suspension, expulsion, or rescission of a degree. Suspension, expulsion, or rescission of a degree must be implemented by the president's designee.
- g. If the accused student receives proper notification of the hearing and fails to appear when the hearing has been scheduled, the hearing will be held in the student's absence and the department chair will render a decision based upon information presented by the faculty member/administrator.
- h. Following the hearing, the department chair will render a determination based on the information presented at the hearing. Within ten calendar days of the hearing, the department chair will forward a written report summarizing the hearing that includes the outcome, the factual basis for the determination reached, the sanction to be issued, and the appeal procedures. The original report is sent to the student with copies to the faculty member/administrator and Office of the Provost. The Office of the Provost will file the official documents with the Office of Student Conduct.
- i. In the event that a department chair cannot or will not fulfill the above role, or in the event that the person filing the referral is an administrator or department chair, the provost/

designee will determine the appropriate individual to fulfill the department chair's role and inform the student and the faculty member/administrator filing charges within ten calendar days of receiving notification of the allegation.

- j. If a prior academic violation for the student is on record, the case must be referred to the Academic Integrity Board (see section D, Multiple Violations). Otherwise, if there is no appeal, the recommended sanction will be imposed.

**B. Academic Integrity Board (AIB).** The AIB may be asked to hear cases filed at Option III: Resolution by Formal Adjudication. In addition, the AIB will hear all cases in which appeals to the chair's decision are accepted by the provost/designee (see sections C.1. and C.2., Appeals). The AIB will also review sanctions in cases of multiple violations (see section D).

1. For graduate-level hearings and reviews, the AIB will be made up of four (4) faculty members, one of whom will chair the board, and two (2) graduate students. For undergraduate hearings and reviews the AIB will be made up of four (4) faculty members, one of whom will chair the board, and two (2) undergraduate students. A quorum requires the presence of four persons, at least one of whom must be a graduate student (for cases at the graduate level) or an undergraduate student (for cases at the undergraduate level). All members, including the chair, are voting members.
2. When an AIB hearing is called, the AIB will be convened by the provost/designee. The accused student shall be notified of the time, date, and place of the hearing and the names of those AIB members scheduled to review his/her case. If the hearing is an appeal, this notification will also include details of the charges, including the time, date, and place of the alleged offense(s) and the recommended sanction(s). If the hearing is a review of sanctions in a multiple-violation case (see Section D), the notification should also indicate that more severe sanctions might be imposed. The hearing should be scheduled no sooner than ten calendar days from the date of notification to the student.
3. No later than three days prior to the date of the hearing, a student appearing before an AIB may, with good cause, provide written notice of any challenge to any member on the board sitting in judgment of his/her particular case. In counting the three days, weekends and official school holidays will not be included. When such a challenge is made, an alternate member will be appointed to the AIB. Failure to give proper notice of a challenge shall be a waiver of the right to make the challenge at any time during the hearing.
4. The AIB will review all material and hear all evidence pertinent to the case from the accused and all witnesses. Members of the AIB shall be free to ask relevant questions to clarify information or resulting issues.
5. The AIB will hear evidence appropriate to the nature of its review (see section C, Appeals).
6. The student shall have a fair and reasonable opportunity to answer, explain, and defend against information and witnesses' statements presented at the hearing. The student shall also have the opportunity to submit written, physical, and testimonial evidence and to call relevant witnesses on his/her behalf.
7. The accused student may identify an advisor, who may be an attorney, to be present at the hearing. The advisor may only consult privately with the student.
8. After hearing all evidence, the AIB will privately make its decision based upon the evidence presented and within the scope of its review. A majority vote of the AIB shall be required for any decision. If the AIB finds that the student more likely than not committed the misconduct or infraction, and the student has no prior academic violation on record, it may accept, reduce (but not increase), or modify the recommended sanction. If the student does have a prior academic violation on record, the AIB may increase the recommended sanction (see section D, Multiple Violations).
9. If the student waives his/her right to a hearing in writing, or chooses not to appear at the AIB hearing, the case will be adjudicated based upon the evidence presented at the scheduled hearing.

10. All hearings are closed unless the student requests an open hearing in writing. The AIB chair has the authority to make the final decision regarding access of spectators to the hearing.

11. The AIB must submit a written report of the decision within ten calendar days to the provost/designee, who will forward the decision to the involved parties.

**C. Appeals.** These appeal procedures apply to cases resolved through formal adjudication. Cases of academic integrity that are resolved through Informal Resolution or Documented Agreement cannot be appealed.

1. If, after receiving the department chair's report on the outcome of the hearing, the faculty member/administrator or the student disagrees with the decision, the sanction, or both, he/she may appeal to the provost/designee within ten calendar days of receiving the report. This appeal must be in writing and describe in detail the grounds for the appeal. These reasons may include the following:
  - a. Denial of a fair and reasonable hearing
  - b. New evidence (applies when there is an acceptable reason why the information was not presented at the original hearing)
  - c. Excessively harsh sanctions
2. The provost/designee may deny the appeal or direct the appeal to be heard by an AIB within ten calendar days. All appeals involving sanctions of involuntary withdrawal from part of IUP's academic or other programs, suspension, expulsion, or rescission of a degree will be heard by an AIB.
3. Unless the recommended sanction is suspension, expulsion, or rescission of a degree, the decision of the AIB is final and will be implemented by the provost/designee.
4. Suspension, expulsion, or rescission of a degree may be recommended by the AIB but can only be implemented by the president's designee, who is responsible for verifying that due process was followed.

**D. Multiple Violations**

1. Information about prior violations is not relevant to determining whether a student violated the policy in the current case. However, such information is pertinent in determining the appropriate sanction.
2. If a student is found in violation of academic integrity two or more times, all materials within the student's past and present academic integrity files shall be used in determining appropriate sanctions. Students with multiple academic integrity violations of record may be subject to additional sanctions, including possible suspension or expulsion from the university.
3. For cases previously resolved by documented agreement or through formal adjudication at the department chair's level, an AIB hearing will be scheduled. This hearing will review all information pertinent to the determination of an appropriate sanction but will not reconsider the issue of whether the policy violation occurred. After considering the severity of the current and prior violations, the AIB may determine that a more severe sanction is appropriate.
4. The AIB should request information on prior violations only after determining that a violation has occurred. Information on prior violations should be used in determining the appropriate sanction.
5. The AIB must submit a written report of the decision within ten calendar days of its decision to the provost/designee, who will forward the decision to the involved parties.
6. The student may appeal any new sanction to the provost/designee. The provost/designee may deny the appeal or, on the basis of denial of a fair and reasonable hearing, new evidence, or excessively harsh sanctions, direct the appeal to be heard by a second AIB.

**E. Sanctions**

1. The following sanctions may be agreed upon by the student and faculty member/administrator through Informal Resolution or Documented Agreement. All grade reductions require the approval of the instructor of record. If the work is graded by a committee, a grade reduction requires the approval of the majority of the committee.

- a. Single Grade Reduction: Reduction of grade or failure on project, examination, quiz, or other academic exercise on which the student is alleged to have cheated.
  - b. Course Grade Reduction: Reduction of course grade or failure in the course. If the violation involves a project spanning multiple courses (such as a dissertation or multiple semester internship), the grade reduction may apply to all courses involved.
  - c. Constructive or Educational Task: A task which requires the student to examine his/her dishonest behavior and which may benefit the student, campus, or community.
  - d. Other: Sanctions deemed appropriate and tailored to a specific violation as determined by the faculty member/administrator. Any reasonable sanction or combination of sanctions for a given violation may be agreed upon by the student and faculty member/administrator.
2. In addition to the above, the following sanctions may be imposed through formal adjudication.
- a. Letter of Warning: A warning letter may be issued indicating that the student has been found in violation of an academic policy and that failure to comply with policies in the future may result in further disciplinary action to be handled as a second offense. The letter of warning will remain in effect for a period of time as specified by the individual or board hearing the case.
  - b. Disciplinary Probation: Disciplinary probation, which is for a period of time specified by the individual or board hearing the case, is an indication that a student's status at the university is seriously jeopardized. If the student is found in violation of another IUP policy during the probationary period, a more serious sanction will be levied, including possible involuntary withdrawal from part of IUP's academic or other programs, suspension, or expulsion from the university.
  - c. Involuntary withdrawal from part of IUP's academic or other programs: A student may be denied the right to participate in some segment of IUP's programs. Such involuntary withdrawal might be imposed on either a temporary or permanent basis.
  - d. Rescission of a degree: A student may have his/her degree rescinded if found to have plagiarized or not to have conducted his/her own research on his/her undergraduate thesis, graduate thesis, or graduate dissertation.
  - e. Suspension: A student may be suspended from the university for a specified period of time, not to be less than the remainder of the current semester. Suspension requires that a student remove himself/herself from university premises, not attend classes or social activities, and not be present on university or Student Cooperative Association property during the period of suspension.
  - f. Expulsion: Expulsion may be considered under any of the following circumstances: when there is a very serious violation of the Academic Integrity Policy, when a student is proven to have violated the Academic Integrity Policy on more than one occasion, or when a student appears before the board after already having been suspended. Expulsion from the institution is permanent. Appeals to the sanction of expulsion must be submitted to the Office of the President. If necessary, the president will consult with legal counsel in these cases. Suspension, expulsion, and rescission of a degree can be recommended by a faculty member/administrator, department chair, and AIB but can be imposed only by the president's designee for suspension, expulsion, and rescission of a degree; the president's designee is responsible for verifying that due process was followed.
  - g. Other: Further sanctions, including rescission of a graduate degree, may be recommended through written agreement approved and signed by the faculty member and the dean of the School of Graduate Studies and Research.

#### F. Records and Recordkeeping

1. Records of Informal Resolution. Although no official forms are filed at this level of resolution, it is *strongly recommended* that a faculty member/administrator and student who reach an informal

agreement put the agreement in writing with a copy to each participant. This protects each party in the event of any future attempt at renegotiation.

2. Records of Resolution by Documented Agreement. Documented Agreement Resolutions are filed with the Office of Student Conduct. They are not considered formal disciplinary records until, and unless, the student is found in violation of this policy a second time. They are internal university records used for monitoring students for multiple violations only. If a second documented agreement form is filed or a student is found in violation of the policy through formal adjudication, the student will then have a formal disciplinary record which includes records of both violations. This formal record is maintained according to the IUP judicial system recordkeeping policies.
3. Records of Formal Adjudication. Records of academic integrity cases resolved through formal adjudication are filed with the Office of Student Conduct. They are maintained as formal disciplinary records in accordance with IUP judicial system recordkeeping policies. Records of cases involving suspension, expulsion, or rescission of a degree must be maintained for a minimum of seven years.

#### G. Operational Notes

1. In cases where a violation is alleged at, or near, the end of the semester and resolution by informal resolution, documented agreement, or formal adjudication cannot be completed before grades are submitted, the faculty member should submit a designation of "Incomplete" (I) for the student. The "I" designation will remain on the student's record until the case has been resolved. Once the case has been resolved, the "I" designation will be replaced with the appropriate grade.
2. If the violation is alleged during the semester when classes are in session, the accused student should continue attending all classes and continue to complete course requirements during the resolution of the academic integrity case.
3. Conversion of a Withdrawal: Individual course withdrawals initiated by a student prior to resolution of an academic integrity referral will not remain on the transcript if the student is found to have violated the policy and the resolution of the referral is the assignment of a grade. If the student has withdrawn and has been found to violate the policy, another grade, including an "F," may be placed on the transcript. If the student has withdrawn and has not been found to violate the policy, the "W" will remain on the transcript.
4. The ten-day requirement within this policy is a period of time intended to reasonably assure swift notification of an alleged violation and a swift response while allowing the student a reasonable opportunity to prepare a response. Either a faculty member/administrator or student may request an extension of time for good cause; this extension may be granted by the provost/designee.
5. The university may withhold transcripts, grades, diplomas, or other official records pending the disposition of cases, if such action is reasonably necessary to preserve its ability to enforce its rules.
6. The provost/designee may modify the procedural provisions of these rules by the issuance of written orders to deal with particular unusual procedural situations, so long as no order shall contradict the rules of the Board of Governors of the State System of Higher Education governing due process for students, and no such rule shall deny fundamental fairness to students by, for example, effectively constituting a denial of notice or opportunity to be heard.
7. This policy will be reviewed by the Senate Academic Committee after five years.
8. Failure to comply with the sanctions issued under this policy will result in a referral to the Office of Student Conduct for violation of Academic Integrity Policy and Procedures, Section II, Violation #9 by the Office of the Provost.

The various forms described in this policy are available from the Office of the Provost, the Office of the Vice President for Student Affairs, deans'

offices, or department offices. Questions concerning the Academic Integrity Policy and Procedures can be directed to the Office of the Provost.

## Final Examination Policies

The final examination week is part of the regular academic program and must be incorporated into each instructor's course plan for the semester. Final examinations are not the only legitimate type of terminating activity, and therefore, the instructor may choose an appropriate activity that conforms to course objectives.

The terminating activity shall take place only at the time and location assigned by the Registrar's Office. Unless granted an excused absence, the faculty member responsible for the course must be present to direct the terminating activity. Faculty members may require student participation in the terminating activity.

Faculty members who do not schedule or do not attend the terminating activity for a course may be subject to disciplinary action commensurate with unexcused absences. Once the final examination has been set by the Registrar's Office, changes and absences must be approved by the instructor's dean.

Faculty members are only obligated to offer a make-up in cases where officially scheduled exams are in conflict. Where such conflicts exist during the examination period, the following general rules apply:

1. The higher-numbered course takes precedence. Thus, a student enrolled in GEOG 102 and ECON 325 would take the ECON 325 exam at the assigned time and the make-up in GEOG 102.
2. If courses in conflict are the same level and number, an *alphabetical determination by full name of the department, not its acronym, will be made*. For example, a student enrolled in MATH (Mathematics) 350 and MGMT (Management) 350 would take the MGMT 350 exam at the assigned time and a make-up in MATH 350.

## Maximum Number of Exams on One Day/Conflicts

A student may not be required to take more than three final exams on any one regularly scheduled examination day. For any exam over three, a make-up exam must be scheduled by the instructor for the student, at his or her request, into another mutually agreeable regular final examination period. The rules determining conflict resolution (listed above) will determine which exam or exams a student may request as make-ups.

## Night Exam Policy

All tests, examinations, and quizzes should normally be administered during the prescribed course hours. Deviations to allow night exams for valid educational reasons, within the guidelines listed below, must be approved by the department and the dean.

### Guidelines

1. Night exams can only be scheduled on Monday through Thursday evenings within the 6:00-10:00 p.m. time period.
2. Appropriate physical facilities must be arranged in advance without encroachment upon other authorized university functions.
3. If night exams are to be given, the day of the week on which they will be given must be listed in the course schedule on URSA prior to registration.
4. No night exam can take precedence over a regularly scheduled class.
5. Arrangements for nonpunitive make-up exams at a mutually agreeable time must be available for students who cannot attend the night exam.
6. For each hour of night exams, an hour of regularly scheduled class time will be cancelled. Such cancellations are prohibited for two class days immediately preceding or immediately following holiday and/or vacation periods and/or semester terminations, as published in the academic calendar.

## Class Disruptions

Students and faculty alike should strive to create a class environment that reflects mutual respect and the importance of learning. If a student's behavior disrupts that environment, the faculty member has a responsibility to seek resolution of the problem.

A faculty member is empowered to request that a student leave during a particular class period if, in the measured opinion of that faculty member, the student: (1) significantly disrupts the learning process, or (2) is a threat to others.

If the student refuses to leave or if the faculty member deems it appropriate, law enforcement officers may be called to remove the student.

If the behavior is especially egregious or potentially harmful, or if the student refuses to modify the behavior, the faculty member may, with the consent of his/her academic dean and in consultation with the department chairperson, keep the student from returning to class until the case can be adjudicated under the Academic Integrity Policy. When appropriate, criminal charges should also be filed.

If deemed appropriate, the adjudicators may render a decision that removes the offending student from the class or the university. If so, the university will assign, in lieu of a grade, a designation that indicates a withdrawal. If grades are due before a final decision has been reached, the instructor should assign a temporary designation of "I" (Incomplete).

If the student is allowed to return, the student will have the option of reentering another open section of the course if feasible. When appropriate, the student should be allowed a reasonable opportunity to make up any work missed during the forced absence.

If a student's grade is adversely affected by a capricious forced absence, the student may file a grade appeal.

# Requirements for Graduation

Undergraduate students at IUP may pursue programs of study in any one of six undergraduate colleges: the Eberly College of Business and Information Technology, the College of Education and Educational Technology, the College of Fine Arts, the College of Health and Human Services, the College of Humanities and Social Sciences, or the College of Natural Sciences and Mathematics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or the Bachelor of Science in Education. The Eberly College of Business and Information Technology and College of Education and Educational Technology offer Associate of Arts degree programs. The College of Natural Sciences and Mathematics also offers Associate in Applied Science and Associate in Science degrees.

To meet graduation requirements in a baccalaureate or an associate degree program, the student must satisfy all of the degree requirements, which fall into three categories: 1) university requirements, 2) college requirements, and 3) department requirements. Requirements of the latter two categories may be found under the college and the department in which the student is pursuing a program of study.

University requirements for graduation in all curricula consist of Liberal Studies requirements, residency requirements in regard to awarding of degrees, and the credit and cumulative grade-point average requirements.

A student may earn a second undergraduate baccalaureate degree by completing a minimum of 30 additional credits. A student may complete one or more secondary majors while earning the primary degree or may complete a dual baccalaureate degree.

## Academic Life During the Freshman Year

During the Orientation, students meet with faculty advisors to plan a program of courses for their first year. This careful planning considers students' individual preferences, the results of placement testing, and degree program requirements.

With a typical freshman academic schedule, students progress both in the universitywide Liberal Studies program and in their intended majors.

Four Liberal Studies course areas are typically taken by freshmen, and all students are expected to complete these courses during their first year. These are ENGL 101 College Writing, HIST 195 The Modern Era, a course from a list of Fine Arts selections, and a Health and Wellness course from those selections. ENGL 101 enhances skills in written expression that are essential to success at the university. HIST 195 builds critical thinking skills and provides a foundation of knowledge for subsequent courses. Whichever fine arts course is chosen encourages an appreciative participation in campus cultural life. Courses in the Health and Wellness component address the many facets of wellness that contribute to health.

Professors teaching these courses work cooperatively with each other and with Student Affairs Division staff to integrate class work with campus lectures and arts events. Study skills development courses and tutoring resources are offered as available.

## Credits and Cumulative Grade-Point Average Requirement

Each student must complete a minimum of 120 credits to graduate, including a minimum of 48 credits in Liberal Studies (all on a passing basis) and must have a 2.0 (C grade) cumulative GPA and a 2.0 (C grade) GPA in his/her major and/or minor field. Some programs require more than 120 credits for graduation.

## Liberal Studies

All students must fulfill the requirements of the university's Liberal Studies program. This involves a minimum of 48 credits divided among Learning Skills, Knowledge Areas, and Synthesis. The number of credits may rise slightly depending on student choices. Different colleges and sometimes departments within colleges may have specific variations as to how these Liberal Studies requirements are to be met.

Liberal Studies provides the broad vision and understanding that enable individuals to enjoy full, rich lives and to play constructive roles in their

communities. The goals for Liberal Studies include 1) the development of important modes of thinking and intellectual skills: critical thinking, literacy, understanding numerical data, historical consciousness, scientific inquiry, ethical perception, and aesthetic sensitivity; 2) the acquisition of a body of knowledge or understanding essential to an educated person; and 3) an understanding of the physical, as well as the intellectual, nature of human beings.

## Liberal Studies Requirements

**Note:** Specific courses may be required or recommended by colleges or major departments; see degree program outlines for specifications.

Additional courses may be added to some categories during the next academic year.

### Learning Skills: English Composition: Two Courses 7cr

ENGL 101	College Writing	4
ENGL 202	Research Writing (sophomore standing)	3

### Learning Skills: Mathematics: 3-6cr

MATH 101	Foundations of Mathematics	3
MATH 105	College Algebra	3
MATH 110	Elementary Functions	3
MATH 115	Applied Mathematics for Business	3
MATH 121	Calculus I for Natural and Social Sciences	4
MATH 123	Calculus I for Physics, Chemistry, and Mathematics	4
MATH 125	Calculus I/Physics, Chemistry, Mathematics	3
MATH 151	Elements of Mathematics I (1)	3
MATH 152	Elements of Mathematics II (1)	3
MATH 217	Probability and Statistics	3

(1) Restricted to designated majors

### Humanities: Three Courses\* 9cr

\*One course in history, one in literature, and one in philosophy or religious studies.

#### History:

HIST 195	The Modern Era	3
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#### Literature:

ENGL 121	Humanities Literature	3
ENGL 122	Introduction to English Studies (English majors)	3
FNLG 121	Humanities Literature (taught in English)	3
MUHI 102	Music and Literature Survey (Music Education majors only)	3

#### Philosophy or Religious Studies:

PHIL 101	Informal Logic: Methods of Critical Thinking	3
PHIL 120	Introduction to Philosophy	3
PHIL 221	Symbolic Logic I	3
PHIL 222	Ethics	3
PHIL 223	Philosophy of Art	3
RLST 100	Introduction to Religion	3
RLST 110	World Religions	3
RLST 250	Understanding the Bible	3
RLST 290	Christianity	3

### Fine Arts: One Course from List 3cr

ARHI 101	Introduction to Art	3
DANC 102	Introduction to Dance	3
FIAR 101	Introduction to the Arts	3
MUHI 101	Introduction to Music	3
MUHI 102	Music and Literature Survey (Music Education majors only)	3
THTR 101	Introduction to Theater	3

**Natural Science: One Option 8-10cr****Option I: Two-semester Laboratory Course Sequence 8cr**

Two courses with laboratories (4cr each), paired together in a sequence, from the natural science laboratory course list.

**Natural Science Laboratory Sequences:**

BIOL 103/104	General Biology I and II	8
CHEM 101/102	College Chemistry I and II	8
CHEM 111/112	General Chemistry I and II	8
CHEM 113/114	Concepts in Chemistry I and II	8
Two of the following three 4cr sequences, in any order:		8
GEOS 101/102	The Dynamic Earth with lab (4cr)	
GEOS 103/104	Oceans and Atmospheres with lab (4cr)	
GEOS 105/106	Exploring the Universe with lab (4cr)	
PHYS 111/121	Physics I with lab <i>and</i>	8
112/122	Physics II with lab	
PHYS 131/141	Physics I with lab (calculus) <i>and</i>	8
132/142	Physics II with lab (calculus)	
SCI 105/106	Physical Science I <i>and</i> II (either order)	8

**Option II: One Laboratory plus****Two Nonlaboratory Courses 10cr**

One course with laboratory (4cr) from the natural science laboratory course list followed by two courses (3cr each) from natural science nonlaboratory course list. One of the nonlaboratory courses may be counted again among the Liberal Studies Electives.

**Natural Science Laboratory Courses:**

BIOL 103	General Biology I	4
CHEM 101	College Chemistry I	4
CHEM 111	General Chemistry I	4
CHEM 113	Concepts in Chemistry I	4
GEOS 101/102	The Dynamic Earth with lab	4
GEOS 103/104	Oceans and Atmospheres with lab	4
GEOS 105/106	Exploring the Universe with lab	4
GEOS 201	Foundations of Geology	4
GEOS 203	Surficial Processes	4
PHYS 111/121	Physics I with lab	4
PHYS 131/141	Physics I (calculus) with lab	4
PHYS 151/161	Medical Physics with lab	4
SCI 105	Physical Science I	4
SCI 106	Physical Science II	4

**Natural Science Nonlaboratory Courses:**

BIOL 113	Genetics in Modern Society	3
BIOL 114	Environmental Science	3
BIOL 115	Biotic Diversity of North America	3
BIOL 116	Introduction to Marine Biology	3
BIOL 117	Understanding HIV Biology and AIDS	3
BIOL 118	The History of Pain	3
BIOL 119	Emerging Diseases	3
CHEM 105	The Forensic Chemistry of CSI	3
GEOS 101	The Dynamic Earth	3
GEOS 103	Oceans and Atmospheres	3
GEOS 105	Exploring the Universe	3
GEOS 150	Geology of National Parks	3
GEOS 151	The Age of Dinosaurs	3
GEOS 152	Physical Resources of the Earth	3
GEOS 153	Forensic Geology	3
GEOS 154	Exploration of Space	3
PHYS 101	Energy and Our Environment	3
PHYS 105	The Physics of Light and Sound	3
PHYS 111	Physics I Lecture	3
PHYS 112	Physics II Lecture	3
PHYS 131	Physics I Lecture (calculus)	3
PHYS 132	Physics II Lecture (calculus)	3
PHYS 151	Medical Physics Lecture	3
SCI 201	Great Ideas in Science	3

**Social Science: Three Courses from List\* 9cr**

\*No course prefix may be used more than once

ANTH 110	Contemporary Anthropology (1)	3
ANTH 211	Cultural Anthropology (1)	3
ANTH 213	World Archaeology	3
CRIM 101	Crime and Justice Systems	3
ECON 101	Basic Economics	3
ECON 121	Principles of Macroeconomics	3
GEOG 101	Introduction to Geography: Human Environment	3
GEOG 102	Geography of U.S. and Canada	3
GEOG 103	Cities of the World: Issues in Planning and Development (1)	3
GEOG 104	Geography of the Non-Western World (1)	3
JNRL 105	Journalism and the Mass Media	3
PLSC 101	World Politics (1)	3
PLSC 111	American Politics	3
PSYC 101	General Psychology	3
RGPL 103	Cities of the World: Issues in Planning and Development (1)	3
SOC 151	Principles of Sociology	3
SOC 231	Contemporary Social Problems	3

(1) Also fulfills requirement for non-Western course

**Health and Wellness: One Course****3cr**

HPED 143	Health and Wellness	3
FDNT 143	Nutrition and Wellness	3
NURS 143	Healthy People	3

An alternate method of fulfilling this requirement is the completion of one year of Military Science/ROTC: MLSC 101 Introduction to Military Science and Lab (2cr) and MLSC 102 Fundamentals of Military Science and Lab (2cr). Verified successful completion of Basic Training in any U.S. Armed Service is transferable as MLSC 101 and 102. MLSC 203 and 204 may be substituted for MLSC 101 and 102.

**Liberal Studies Electives:****0-9cr**

- At least one course must be numbered 200 or higher.
- No course carrying the student's major prefix may be used.
- No course prefix may be used more than once, except for intermediate-level foreign language prefixes (FRNC, GRMN, ITAL, and SPAN), which may be used twice.
- Refer to program of study for specific requirements.

See list of Nonlaboratory Natural Sciences for additional courses which may be used as Liberal Studies electives. Also see list of Non-Western Cultures courses, some of which may be used as Liberal Studies Electives.

**The following courses are also approved:**

ANTH 286	Marriage, Kinship, and the Family [same as SOC 286]	3
ARHI 205	Ancient to Medieval Art	3
ARHI 207	Renaissance through Modern Art	3
ARHI 222	Art in America	3
BTED 101	Computer Literacy [same as COSC/IFMG 101]	3
BTED 201	Internet and Multimedia [same as COMM/COSC/IFMG/LIBR 201]	3
CDFR 218	Child Development	3
CDFR 224	Marriage and Family Relations	3
CNSV 101	Personal and Family Management	3
CNSV 315	Consumer Economics and Family Finance	3
COMM 101	Communications Media in American Society	3
COMM 201	Internet and Multimedia [same as BTED/COSC/IFMG/LIBR 201]	3
COMM 325	Women in Media	3
COMM 380	The History of African Americans in Film	3
COSC 101	Computer Literacy [same as BTED/IFMG 101]	3
COSC 201	Internet and Multimedia [same as BTED/COMM/IFMG/LIBR 201]	3



BTST 342	Intercultural Business Communication	3
COMM 230	Issues in International Communication	3
ECON 350	Comparative Economic Systems	3
ENGL 396	The Literature of Emerging Nations	3
GEOG 252	Geography of Latin America	3
GEOG 254	Geography of Russia, Central Eurasia, and Eastern Europe	3
GEOG 255	Geography of Africa	3
GEOG 256	Geography of East Asia	3
GEOG 257	Geography of South and Southeast Asia	3
HIST 206	History of East Asia	3
HIST 208	Survey of Latin American History	3
HIST 327	Soviet Union and Contemporary Russia	3
HIST 330	History of the Islamic Civilization	3
HIST 331	Modern Middle East	3
HIST 332	History of Early China	3
HIST 334	History of Modern China	3
HIST 337	History of Modern Japan	3
HIST 356	African History II: 1600 to Present	3
HIST 367	Native American History	3
ITST 281	Special Topics in Non-Western Studies	3
LAS 370	Latinos and Diasporas [same as ANTH 370]	3
LAS 480	Latin American Studies Seminar	3
PLSC 382	Political Systems: Africa	3
PLSC 387	Political Systems: Latin America	3
PLSC 389	Developing Nations	3
PNAF 131	Introduction to Pan-African Studies	3
RLST 220	Buddhist Thought and Practice	3
RLST 311	Eastern Philosophy	3
RLST 360	African Religions	3
RLST 365	Native North American Religions [same as ANTH 365]	3
RLST 370	Religions of China and Japan	3
RLST 375	Religions of India	3
RLST 380	Islam	3
SOC 271	Cultural Area Studies: Africa [same as ANTH 271]	3
SOC 272	Cultural Area Studies: China [same as ANTH 272]	3
SOC 273	Cultural Area Studies: Southeast Asia [same as ANTH 273]	3
SOC 274	Cultural Area Studies: Latin America [same as ANTH 274]	3
SOC 314	Native Americans [same as ANTH 314]	3
SPAN 244	Modern Mexico	3
SPAN 344	Twentieth-Century Spanish-American Civilization and Culture [taught in Spanish]	3
SPAN 364	Survey of Spanish-American Literature [taught in Spanish]	3

**Fulfills LS Non-Western requirement only:**

CRLG 151, 201, or 251	Arabic II, III, or IV	3
CRLG 152, 202, or 252	Chinese II, III, or IV	3
CRLG 155, 205, or 255	Hindi II, III, or IV	3
CRLG 156, 206, or 256	Hungarian II, III, or IV	3
CRLG 158, 208, or 258	Japanese II, III, or IV	3
CRLG 159, 209, or 259	Korean II, III, or IV	3
CRLG 162, 212, or 262	Russian II, III, or IV	3
ECON 339	Economic Development I	3
PLSC 285	Comparative Government II: Non-Western Political Systems	3

Certain Study Abroad programs in non-Western culture areas are offered (information is in the respective catalog section; further information is available in the Office of International Education).

**Synthesis: One Course**

**3cr**

LBST 499	Senior Synthesis (required of all students)	3
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**Prerequisite:** 73 or more credits earned

This course helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics is available

each semester and summer session. Students should schedule the course during the senior year, or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

**Writing Across the Curriculum:  
Minimum of Two "W" Courses**

All students must include among the total courses required for graduation a minimum of two designated writing-intensive courses. One of these courses must be in the student's primary major; the other(s) may be in Liberal Studies, college or major requirements, or free electives. Such courses, which involve extensive use of writing as part of the learning experience, are identified with a "W" as part of the section number in each semester's schedule of classes listing on URSA.

**Eligibility and Application for Graduation**

Commencement ceremonies at IUP are in May at the conclusion of the spring semester and in December at the conclusion of the fall semester. Only students who have completed all requirements for graduation by the end of the semester are eligible to participate in the commencement exercises. Students who have withdrawn from courses or have elected to take incompletes or have failed courses during the semester and thus have not met the requirements for graduation may not participate in commencement exercises until those requirements have been fulfilled. Students completing requirements in August and December are included in the program list for the December ceremony.

Students are responsible for knowing and fulfilling the requirements for graduation in their degree program. All students who expect to graduate are required to apply for graduation. Dual baccalaureate degree students must file a separate graduation application for each degree. Undergraduate students should check the published deadlines for graduation application and should apply on the web at [www.iup.edu/ursa](http://www.iup.edu/ursa) by logging in to the secure website and clicking on the "Academic Records" link under the "Student Services" menu. Further information on applying for graduation may be obtained at the associate dean's office of the student's major college.

Degrees will not be posted until approval by the associate dean of the college of the student's primary major is received in the Registrar's Office. Diplomas will then be issued provided all financial obligations and requirements (including primary major, secondary majors, and minors) have been satisfied.

**Pre-Approval for Transfer Coursework**

Students enrolled at IUP who wish to take coursework at another institution (either during the summer or regular semesters) must complete an Application for Pre-Approval of Coursework at Another College/University prior to taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside coursework for IUP's repeat policy. Only the credits for which students receive the grade of A, B, or C will transfer. If P/F is the only grading option available, there must be a narrative evaluation from the faculty member certifying that the work was of "C" level or better. No more than 60 credits total may be earned at a junior or community college for application toward an IUP degree. If the courses are being taken within the student's last 30 credits, the courses must be taken at IUP unless the student's residency requirement for awarding of degrees is waived by the college dean. Courses without prior approval are taken at the risk of the student; there is no obligation on the part of any officer of this university to accept or transfer such credit.

Forms for approval of off-campus coursework are available in the office of the department chairperson of your major or the Office of Transfer Credit Evaluation/Admissions Office. Full directions on the form outline the steps involving the transfer evaluation, student's advisor, and college dean, or designee. After completing off-campus coursework, students should have the institution at which the work was taken send a final official transcript directly to IUP, Transfer Services, 117 Sutton Hall, 1011 South Drive, IUP, Indiana, PA 15705. Copies of transcripts that are opened or unsealed will not be accepted.



## Reevaluation of Transfer Credit

If a student feels a course was evaluated incorrectly, a reevaluation form can be printed by visiting [www.iup.edu/creditevaluation](http://www.iup.edu/creditevaluation). A link on this page will lead to the reevaluation form.

A reevaluation form can also be picked up in G27 Sutton Hall. Once the student has the form, it should be filled out and syllabi for the course(s) that are under question should be attached to the form. The form along with the syllabi can be dropped off in G27 Sutton Hall for review by the Transfer Services Coordinator. If syllabi are not provided, the reevaluation cannot be done.

## Program Changes

To insure their quality and relevance, academic programs at IUP are subject to review and change by duly appointed and responsible university groups. Because of this, the university recognizes that provisions must be made to prevent hardship to students already enrolled in programs if changes later occur in specific or general program requirements. Students affected by changes in programs, policies, and regulations are therefore given the option of following those requirements that are in effect when the student was first enrolled in the program or those in effect at the time of expected graduation. The student cannot, of course, combine chosen elements of the two. Should a question of rule interpretation arise with respect to changes, the student, the student's advisor, or both should petition the college dean for a decision about which requirements apply.

## Residency Requirement for Awarding of Degrees

All students receiving an initial IUP baccalaureate degree are required to complete 45 credits in IUP courses. Students must complete at least 50 percent of required credits for an IUP major in IUP courses and a minimum of 6 credits in IUP courses for a minor. Normally, the student will complete the final 30 credits in IUP courses, unless specific approval has been secured from the dean of the student's college. This approval is generally sought as part of the process for prior approval of off-campus coursework.

IUP courses include all courses listed in the Undergraduate and Graduate catalogs.

## Non-Native Students: English Language Requirements

Non-native students of English, either international students or those from the U.S. for whom English is not their first learned language who have not been admitted as undergraduate students are required to take an ESL Screening/Placement Test prior to registration in the first semester attending IUP. The test is administered prior to registration in both the fall and spring semesters. Results of this test are used to determine for which English course (ENGL 100/ESL, ENGL 101/ESL, ENGL 202/ESL, ENGL 121/ESL) a newly admitted non-native student must register. In addition, any currently enrolled non-native student can take the regularly scheduled test to determine registration for non-ESL English courses. For further information, contact Chair, English Department, 724-357-2261.

## Timely Completion of Degree Requirements

The minimum total credit requirement for a baccalaureate degree at IUP is 120. Students who enroll in degree programs that require more than 120, or who seek the added benefit of a double major, minor, or specialized program, or who change majors should plan their sequence of courses carefully with an advisor. Such students should be alert to the possibility that they may need to carry a heavier-than-average class load in order to complete the degree in eight semesters. In some situations, summer work or an extra semester may be necessary. The need to enroll in remedial or other preparatory coursework or to repeat courses may also affect progress toward a degree.

## Undergraduate Catalog Applicability Time Frame

The university reserves the right to modify degree requirements through established governance channels. However, the general policy has been established that the following time frame regulations form the basis for application of the university's undergraduate degree requirements:

1. A student who has been in continuous registration (fall and spring semesters) or who has interruption(s) of less than two calendar years is governed by the requirements outlined in the catalog in effect at the time of entrance into a degree program (major).
  - a. A student who changes majors will be governed by the requirements of the major and/or college at the time of acceptance into the new major, without change of Liberal Studies requirements except as specified by the new major.
  - b. A student entering through the nondegree program is governed by the requirements in effect at the time degree candidacy is awarded.
  - c. A part-time student may be covered by these provisions of continuous registration to a maximum of ten years.
2. A student whose education is interrupted by two or more calendar years will be governed by the requirements in effect at the time of readmission to the university. The readmission may carry specific requirements/substitutions necessary to provide for program integrity.
3. The applicability of coursework completed more than ten years prior to the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.

# Academic Affairs Division Areas

Gerald W. Intemann, Provost and Vice President for Academic Affairs

John N. Kilmarx, Associate Vice President for Academic Administration

Innocent Onwueme, Associate Provost for Academic Programs and Planning

Website: [www.iup.edu/academicaffairs](http://www.iup.edu/academicaffairs)

The Academic Affairs areas below provide instruction in several disciplines that are not specific to one of the university's distinct colleges. They offer services and instruction under the direction of the Provost's Office.

## The IUP Libraries

Website: [www.iup.edu/library](http://www.iup.edu/library)

Luis J. Gonzalez, Dean

Sandra L. Janicki, Chairperson; Brown, Clouser, Connell, Diaz, Drummond, Heider, Janosko, Knupp, McDevitt, Pang, Rahkonen, Shively, Wick; and professors emeriti Chamberlin, LaFranchi, Laude, Scheeren, Snead, Steiner, Wolf

The IUP Libraries serve the academic and scholarly needs of students and faculty with 885,960 volumes, 1,285 periodical paper or microform subscriptions, and 23,127 electronic subscriptions, as well as media, micro documents, and information databases. In addition to the main facility, there is a library at each of the regional campuses at Northpointe and Punxsutawney, as well as the Orendorff Music Library in Cogswell Hall. The online catalog is accessible throughout the libraries and on the Internet from remote locations. IUP students can use a variety of electronic resources, including abstracts, statistics, and full-text articles on line.

Library faculty members offer individual and group instruction in using the library and several credit courses.

## Robert E. Cook Honors College

Website: [www.iup.edu/honors](http://www.iup.edu/honors)

Janet E. Goebel, Director

The Robert E. Cook Honors College is IUP's universitywide honors program for undergraduate students of all majors who are accepted into the program. Its goal is to provide a unique educational environment in which students of high ability and motivation can achieve their potential in a nurturing learning community of fellow students and professors. The Honors College makes an intentional effort to see that students and faculty are provided with integrated courses, an appreciation for multiple perspectives on important issues, and common learning experiences wherever possible; it strives to see that the learning community remains cohesive with both academic and cocurricular components throughout the four years of the student's honors experience.

The Honors College provides a challenging opportunity for academic and personal development through an integrated program of curriculum, residence, and cocurricular activities. Whitmyre Hall is a combined honors residential/academic facility which includes classrooms and program offices as well as student rooms and cocurricular spaces.

Students in any academic major may apply for admission to the Honors College. Students may enter the program as freshmen or later as sophomore "transfer" students from either another university or from IUP. An application is required and is evaluated by the Honors College Admissions Board.

### Program Requirements

Students accepted into the Honors College as freshmen are required to live in Whitmyre Hall during the freshman year and are encouraged to remain in the honors residence hall throughout their undergraduate career as space permits. Exceptions to the freshman residency requirements will be made only for nontraditional students (students twenty-five or older or who are married and/or have children) or for students who reside at home with their legal guardians in the Indiana area while at IUP. Application for exemption from this residency requirement should be made in the form of a letter to the Honors College Director at the time of application to the program.

Honors College students are required to maintain an overall 3.25 GPA. A student who falls below the 3.25 GPA will have one semester of Honors College probation during which he/she may attempt to raise the GPA to 3.25 and remain in good standing. Students who are dismissed from the Honors College due to GPA may apply for readmission after having raised the GPA to acceptable honors standards.

### Course Requirements for Students Admitted as Freshmen

Students admitted as freshmen are required to complete 24 credits of honors work including:

- **18 credits:** Honors Core I, II, III (HNRC 101, 102, 201) and Honors Core: Sciences (HNRC 202). HNRC 101 and 102 is a first-year sequence; HNRC 201 and 202 may be taken in either order during subsequent semesters. HNRC 101, 102, and 201 replace Liberal Studies requirements for College Writing (ENGL 101), three humanities courses (ENGL 121, HIST 195, and either RLST 100 or PHIL 120), and one fine arts course (either ARHI/MUHI/THTR 101). HNRC 202 replaces Liberal Studies requirements for either one nonlaboratory science and one social science *or* two nonlaboratory sciences *or* two social sciences, depending on the units selected.
- **3 credits:** HNRC 499 Honors Senior Synthesis (replaces Liberal Studies requirement for LBST 499)
- **3 credits:** Additional honors coursework

Students are encouraged to complete at least one honors course during every academic year, although it is recognized that this might not be possible for students participating in study abroad or off-campus internships. For information on departmental honors programs, please see the individual college listings. Departmental honors courses count toward the total number of honors credit hours required for Honors College graduation.

Students are also encouraged to complete an undergraduate thesis for graduation from the Honors College with distinction. Students may enroll for thesis credit by completing the necessary approval forms and scheduling HNRC 483 Honors Thesis/Independent Study or, in some departments, by scheduling a departmental honors thesis course.

Applicants interested in further information are invited to contact the Honors College Admissions Office at 1-800-487-9122 or 724-357-4971.

## Military Science

Website: [www.iup.edu/rota](http://www.iup.edu/rota)

LTC David Meyer, Chairperson; 1LT Angove, MAJ Block, SFC Folmar, MAJ McTavish, MSG Ortega, SFC Sample, SFC Steele

### Reserve Officers' Training Corps

The United States Army established a Senior Reserve Officers' Training Corps program at the university in 1950. The ROTC program teaches leadership training that students can apply throughout their careers, be they in business, industry, technology, education, the physical sciences, or the humanities. All Military Science credits count toward graduation, and a student who completes the total program can earn a commission as a second lieutenant and receive placement in one of twenty-four professional officer specialties in the U.S. Army, including Military Intelligence, Military Police, Signal, Medical Service, and the Corps of Engineers.

The ROTC program is divided into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years). In most cases, students progress through the ROTC program by enrolling in MLSC 101 and 102 as freshmen. By taking MLSC 101 and 102, the student fulfills the university's 3-credit Liberal Studies requirement in Health and

Wellness. Students who continue in the Basic Course by enrolling in MLSC 203 and 204 as sophomores incur no military obligation, but they retain the opportunity to compete for a full-tuition ROTC scholarship. Whether they win an ROTC scholarship or not, all students who complete the Basic Course are eligible to enroll in the ROTC Advanced Course. All students receive financial assistance while they are enrolled in the Advanced Course.

### What ROTC Offers

- A comprehensive academic program in military leadership and teaches practical skills such as self-defense, adventure training, rappelling, marksmanship, orienteering, and first-aid techniques.
- Regular ROTC classes for two semesters satisfy the mandatory Health and Wellness Liberal Studies requirement for graduation.
- Equipment, ROTC textbooks, and uniforms are issued, without cost, to enrolled students.
- Students enrolled in the Basic Course (MLSC 101, 102, 203, and 204) become eligible for full-tuition scholarships and enrollment in the ROTC Advanced Course.
- Students formally enrolled in the Advanced Course (MLSC 305, 306, 407, 408) receive a cash stipend (\$450-\$500 each month) for ten months during the academic year and receive \$1,200 each year for books.
- Students who complete the Advanced Course and graduate from IUP receive commissions as second lieutenants and serve in one of three Army components: Active Army, National Guard, or Army Reserve.

### ROTC Basic Course

The first two years of Military Science (MLSC 101, 102, 203, and 204) provide a background of the historical role of military forces as well as current national military objectives. In addition, students develop basic leadership skills in problem solving and decision making and learn survival techniques, map reading, self-defense, rappelling, and marksmanship. Graduates of the Basic Course incur no commitment to enroll in the ROTC Advanced Course and incur no obligation for military service. Students may enroll or withdraw from any of the four courses in the ROTC Basic Course under the same provisions and in the same manner as other academic courses at IUP. Veterans of U.S. Armed Forces and students who complete the ROTC Leaders Training Course at Fort Knox, Kentucky, may receive exemption from the ROTC Basic Course. Students who have completed a basic training course are awarded academic credits for MLSC 101 and 102.

### ROTC Advanced Course

The last two years of Military Science (MLSC 305, 306, 407, and 408) compose the Advanced Course and lead to a commission as an officer in the United States Army. To be eligible to enroll in the Advanced Course, a student must meet these criteria: be a citizen of the United States; be physically fit and pass a physical examination; be an enrolled academic junior or senior with at least a 2.0 GPA; be not less than seventeen years of age but less than thirty-nine by the anticipated graduation date; successfully complete the ROTC Basic Course or its equivalent; and be accepted by the Professor of Military Science. Advanced Course students study advanced leadership, management, professional ethics, small unit tactics, military law, and instructional and training techniques. Practical application is the rule, and students have the opportunity to practice and polish their skills as members of the ROTC battalion leadership. Once Advanced Course students agree in writing to complete the Advanced Course, graduate on time, and accept a commission as an officer, they become eligible to receive a monthly tax-free cash stipend of \$450-\$500 for ten months of the academic year.

### Scholarships

High school seniors who have applied to IUP can apply on line for IUP Army ROTC scholarships at [www.goarmy.com/rotc](http://www.goarmy.com/rotc). Currently enrolled IUP undergraduate students can compete for two- and three-year ROTC scholarships, and graduate students can compete for two-year ROTC scholarships even if they are not currently enrolled in Military Science courses. To be fully eligible, applicants must meet these criteria: 2.5 CGPA, full-time student, U.S. citizen, physically qualified, and administratively qualified. Regardless of the term of the scholarship (two, three, or four years), all IUP ROTC scholarships offer these benefits for each year that the scholarship is in effect: full tuition (up to \$10,000), \$1,200 for books, and \$450-\$500

per month for ten months of the school year. Call 1-800-IUP-ROTC for application instructions.

### Program in Military Science

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#### Required Courses:

MLSC 101	Introduction to Military Science	2cr (1)
MLSC 102	Fundamentals of Military Science	2cr (1)
MLSC 203	Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics	2cr (2)
MLSC 204	National Security and Fundamentals of Military Topography	2cr (2)
MLSC 305	Fundamentals of Leadership and Modern Learning/Teaching Relationship	3cr
MLSC 306	Study of Advanced Leader Planning and Execution of Modern Combat Operations	3cr
MLSC 407	Management of the Military Complex to Include Fundamentals of Military and International Law	3cr
MLSC 408	Seminar in Military Analysis and Management	3cr

- (1) MLSC 101-102 may substitute for the Liberal Studies requirement in Health and Wellness.
- (2) MLSC 203-204 are available as free electives to all students without any military obligation.

### Office of Distance Learning and Continuing Education

**Website:** [www.iup.edu/continuing](http://www.iup.edu/continuing)

**Stephen J. Anspacher**, Executive Director

The mission of the office is to serve the lifelong educational needs of non-traditional students, working adults, professional organizations, local and state agencies, and the citizens of the commonwealth by providing access to the academic and human resources of IUP.

### Program for Visiting High School Students (Dual Enrollment)

IUP permits the exceptional high school student to preview university life and earn regular college credit on a limited nondegree basis. Students should contact the Office of Distance Learning and Continuing Education to inquire about the Dual Enrollment Program.

### Noncredit Programs

The office offers a variety of noncredit programs to meet business, industry, and community needs in the areas of workforce training and development, professional development, personal enrichment, and public service.

### Community-University Studies

Noncredit courses and workshops are offered throughout the year. Focusing on enrichment and personal growth, topics include creative leisure, self-improvement, health, fitness, dance, languages, and outdoor pursuits. There are no grades or exams. Instructors are knowledgeable and enthusiastic about introducing others to their areas of expertise. The Great Decisions program is offered every spring.

### Office of International Education

**Website:** [www.iup.edu/international](http://www.iup.edu/international)

**E-mail:** [intl-education@iup.edu](mailto:intl-education@iup.edu)

The Office of International Education (OIE) is the primary catalyst for IUP's international initiatives. The OIE proactively facilitates, promotes, and organizes the international programs, events, support, and initiatives to more fully diversify IUP and the local Western Pennsylvania communities.

The OIE is a central source of information which provides special services for admitted international students, visiting scholars, and international visitors and faculty. The office is also the main resource and support for study abroad programs and international programming. The office provides the following services to students:

- an extensive orientation program for new international students
- advising on immigration matters
- counseling on cultural and personal matters
- preparation and processing of immigration documents
- medical insurance information for international students and exchange/study abroad participants
- financial assistance to qualified international students through the partial tuition waiver
- a predeparture orientation program for exchange and study abroad participants
- a reentry program for participants returning from exchange or study abroad
- multicultural programming for the campus and Indiana community

In addition, the OIE supports Culturelinks, a volunteer program which connects students to the larger community. Culturelinks provides an opportunity for international students to share their perspectives and cultural traditions with others in the university and in the community. The office also sponsors Coffee Hours open to all members of the community. Trips for international and exchange students to New York City and Pittsburgh are arranged and partially funded through OIE.

### **International Exchange and Study Abroad Programs**

Through the OIE, IUP students may take part in study abroad programs. The office houses an exchange/study abroad resource library. Students seeking information on academic programs offered by educational institutions in this country and abroad are welcome to read the materials available in the office. Qualified students planning to travel or study abroad may also purchase the International Student Identity Card—good for discounts, identification, and insurance—in the OIE.

More information about the following programs and programs instituted after the date of this publication can be obtained in the OIE, 724-357-2295, or at the website [www.iup.edu/studyabroad](http://www.iup.edu/studyabroad).

**Botswana, Gaborone.** Students in most majors can study in Southern Africa at the University of Botswana. The university offers an African Culture program as well as courses in business, education, science, humanities, and social sciences. Language of instruction is English.

**Brazil, São Carlos.** Students in the Eberly College of Business and Information Technology have the opportunity to study in Brazil for one semester or an academic year. Language of instruction is Portuguese.

**Brazil, São Paulo.** Students studying in the Eberly College of Business and Information Technology have the opportunity to study in Brazil for one semester or an academic year. Language of instruction is Portuguese.

**China, Chengdu.** Students interested in improving their Chinese language and culture skills can study at Sichuan University. Chengdu is the land of pandas and many historical sites. Languages of instruction are Chinese and English.

**China, Chengdu.** Eberly College of Business and Information Technology students may study for one semester or an academic year at the Southwestern University of Finance and Economics. Language of instruction is Chinese.

**China, Macau.** This exchange at the University of Macau focuses on business study and offers courses in the following areas: accounting, computer studies, economics, finance, management, and mathematics. Language of instruction is English.

**China, Nanjing.** Students can attend Nanjing University and experience Chinese culture and language for a semester or an academic year. Language of instruction is Chinese.

**China, Shanghai.** Students can attend Shanghai Normal University and experience Chinese culture and language for a semester or an academic year. Language of instruction is Chinese.

**Costa Rica, Heredia (summer).** A four-week intensive Spanish language program is offered in the summer at the National University of Costa Rica. For details and brochures, contact the Foreign Languages Department.

**Croatia, Zagreb.** College of Fine Arts students may study for one semester or an academic year at the Academy of Fine Arts and the Academy of Music at the University of Zagreb. Language of instruction is English.

**England, Greenwich.** This exchange is for all majors. Students can attend for fall or spring semester or for a full academic year exchange.

**England, Leeds.** Students wishing to be in an English city environment will find Leeds a perfect choice. Exchanges are for a fall or spring semester or the full academic year. Courses are offered in all disciplines.

**England, Oxford (summer).** A three-week educational and cross-cultural experience is offered in the summer at Oxford University. For details, contact the English Department.

**England, Sheffield.** Students have the opportunity to study for a semester or academic year at Sheffield Hallam University.

**England, Worcester.** Students are offered an opportunity to study at the University of Worcester for one semester or an academic year. Courses are offered in a variety of fields of study.

**Finland, Tampere.** Students studying business or occupational safety are eligible to study at Tampere University of Technology for a semester or academic year. Language of instruction is English.

**France, Nancy.** The opportunity to study for one semester or academic year at the University of Nancy II (140 miles from Paris) is available to qualified students. Language of instruction is French. For business majors, courses are taught in English. For details, contact the Foreign Languages Department or, for Business majors, the Eberly College of Business and Information Technology.

**France, Nancy (summer).** Two programs, one for English-speaking and one for French-speaking participants, are offered in the summer. For details, contact the Foreign Languages Department.

**Germany, Duisberg (summer).** This exchange is for Business majors. The BEST program offers students a chance to study in Germany for a short period.

**Germany, Nürnberg.** Students may study for one semester or an academic year at the Georg Simon Ohm University of Applied Sciences. Business, Sociology, and German students are eligible. Languages of instruction are English and German.

**Ghana, Kumasi.** Students in many majors can study at Kwame Nkrumah University of Science and Technology (KNUST) in West Africa. KNUST also offers an African Culture program. Language of instruction is English.

**India, Bangalore (summer).** Students in the M.B.A. program may study IUP courses in Bangalore on a short, summer program. For information, contact the Eberly College of Business and Information Technology.

**Japan, Nagoya.** Study for one semester or an academic year at Nagoya Gakuin University. A variety of courses are offered in the Asian Studies Program. Languages of instruction are English and Japanese.

**Japan, Osaka.** The opportunity to study for a semester or one academic year at Kansai Gaidai University is available to students interested in Japanese culture. A variety of courses are offered in the Asian Studies Program. Languages of instruction are English and Japanese.

**Jordan, Irbid.** Study for one semester or an academic year at Yarmouk University. Immerse yourself in Arabic in YU's Arabic Language Center. Languages of instruction are English and Arabic.

**Korea, Daegu.** Study for one semester or an academic year at Kyungpook National University. A variety of courses are offered in the Asian Studies Program. Languages of instruction are English and Korean.

**Korea, South Jeolla.** Students interested in improving their Korean language and culture skills and taking academic courses in English can study at Korea University-Sejong Campuses. Located outside of Seoul, students can experience a quieter side of Korea. Languages of instruction are Korean and English.

**Malaysia, Kuala Lumpur.** All students are welcome to attend INTI College, a private university, which offers a full curriculum. Exchanges are

available for fall or spring semester or for a full academic year. Language of instruction is English.

**Mexico, Puebla.** Students wishing to enroll in courses in Spanish, business, international relations/studies, anthropology, and hotel and restaurant management with an interest in Mexican culture have the opportunity to study at the Universidad de las Americas, Puebla, for one semester, academic year, or summer. Languages of instruction are Spanish and English (specific programs such as business and fine arts).

**Norway, Oslo.** Students may take courses offered in art, economics, social sciences, education, fine arts, and more. Language of instruction is English.

**Poland, Opole.** This exchange is open to psychology and studio art majors. Attend Opole University for a semester or an academic year exchange. Languages of instruction are Polish and English.

**Poland, Poznan.** Students studying chemistry, criminology, English, industrial and labor relations, journalism, physics, psychology, and teacher education have the opportunity to study for a semester or an academic year at Adam Mickiewicz University. Language of instruction is Polish; however, many courses are offered in English.

**Russian Federation, Vladikavkaz.** IUP students may study at North Ossetia State University for a semester or academic year. Language of instruction is Russian.

**Scotland (various cities).** Study in a variety of courses at the University of the Highlands and Islands. Students mainly study at the Inverness or Perth campuses.

**Slovenia, Ljubljana.** Students studying in the College of Fine Arts have the opportunity to study for one semester or an academic year at the Academy of Fine Arts and the Academy of Music at the University of Ljubljana.

**Spain, Valladolid.** Students with 12 earned credits in Spanish and an interest in experiencing Spain's culture have an opportunity to participate in the Pennsylvania Valladolid Study in Spain Program during the spring semester. This experience enables students to spend a period of twenty weeks immersed in Spanish culture and language at the University of Valladolid. For details and brochures, contact the Foreign Languages Department.

**Sweden, Karlstad.** Students wishing to enroll in a range of courses with a desire to experience Swedish culture are invited to study at Karlstad University. Language of instruction is English.

**Taiwan, Taipei.** Experience life in Taiwan at Tamkang University. Across-the-board curriculum is offered for semester or academic year exchanges. Languages of instruction are Chinese and English (specific programs).

**Turkey, Ankara.** Study at the Middle East Technical University, located in the country's capital, in a full range of subjects. Language of instruction is English.

### **Amizade**

Interested in participating in a global service-learning project? If so, consider Amizade's options: short term and semester in several countries. Visit their website at [www.amizade.org](http://www.amizade.org).

### **AustraLearn**

With universities located throughout Australia and New Zealand, AustraLearn offers students a wide range of choices in locale, course offerings, and size. Semester and academic-year opportunities are available, with the fall semester (July to November) and the spring semester (February to June).

### **Cultural Experiences Abroad (CEA)**

IUP students can participate in a range of English-medium programs around the world through CEA. For more information, visit the website [www.gowithcea.com](http://www.gowithcea.com) and the OIE.

### **Europe (ETEN)**

This exchange is for Education majors. Study at the following schools: in Denmark, at Hogvangseminariet, Ribe Statsseminarium, or Silkeborg Seminarium; in the Netherlands at Haagse Hogeschool University of Professional Education or Hanzehogeschool; in Norway at Adger/Oslo or

Stord University College; or in Sweden at Malmo University and Goteborg. Exchange times vary for each exchange. Some exchanges offer courses in a language other than English.

### **International Student Exchange Program (ISEP)**

The ISEP offers a wide range of affordable educational and cultural experiences for one semester or academic year for participants at over one hundred institutions in thirty-five different countries (summer and longer exchanges are also possible). If you do not speak a foreign language, you still have many sites in which the language of instruction is English. If you do speak a foreign language, you have even more options. These programs are priced at the in-state IUP rate for all participants. For more information, visit the website [www.isep.org](http://www.isep.org) and the OIE.

### **International Student Teaching Opportunities**

IUP students enrolled as teacher education majors in all certification areas are eligible to participate in this half-semester student teaching program in the following areas: Copenhagen, Denmark; London, England; Worcester, England; Paris, France; Malahide, Ireland; and Gronigen, The Netherlands. See the College of Education and Educational Technology section of this catalog for further information.

### **Study Abroad Italy**

Not fluent in Italian, but interested in Italian language and culture? You should consider studying at one of the English-medium institutions on offer through IUP's affiliate agreement with Study Abroad Italy: Mediterranean Center for the Arts in Sicily, John Cabot University in Rome, Florence University of Arts in Florence, Apicius Culinary Institute in Florence, or NABA (Academy of Arts and Design) or Domus Academy for Fashion in Milan. A wide range of courses are offered. Language of instruction is English.

## **Center for Teaching Excellence**

**Website:** [www.iup.edu/teachingexcellence](http://www.iup.edu/teachingexcellence)

**Mary Anne Hannibal**, Director

The mission of the Center for Teaching Excellence is to foster the enhancement of teaching excellence in all its forms. The center offers many professional development opportunities to the campus community related to teaching and pedagogy. The center recognizes excellence in teaching through selection and presentation of the Annual Faculty Recognition Awards. The center's Reflective Practice Project promotes effective teaching through the use of workshops, monthly meetings, and small "teaching circles." New Faculty Orientation, offered by the center, introduces new faculty members to the university and community and explores topics such as teaching, advising, and assessment. Current relevant and research-based teaching resources are available on the center's website. Faculty are invited and encouraged to utilize the center resources to enhance student engagement in the learning process.

# The Eberly College of Business and Information Technology

Robert C. Camp, Dean

Prashanth N. Bharadwaj, Dean's Associate

Dorothy M. Gracey, Assistant Dean for Student and Alumni Services

Rajendra K. Murthy, Assistant Dean for Technology

Cynthia L. Strittmatter, Assistant Dean for Administration

Website: [www.iup.edu/business](http://www.iup.edu/business)

In the spring of 1994, the College of Business was renamed to commemorate the generous commitment of the Eberly family through the Eberly Family Trust to the developmental needs of the college. Departments within the Eberly College of Business and Information Technology (ECOBIT) include Accounting, Finance and Legal Studies, Management, Management Information Systems and Decision Sciences, Marketing, and Technology Support and Training.

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## College Majors and Concentrations

- Accounting
- Business Education
- Business Technology Support
- Finance
- Human Resource Management
- International Business
- Management (concentrations in Operations Management, General Management, and Entrepreneurship and Small Business Management)
- Management Information Systems
- Marketing

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## Mission Statement

The paramount mission of the ECOBIT is to provide students with a broad range of high-value undergraduate and graduate business programs aimed at developing skills vital to their success in today's world.

The college enrolls a highly diverse student body from Pennsylvania, other U.S. states, and from many countries around the world. The college provides a student-centered and technologically integrated learning environment. The college maintains a global focus and provides opportunities for real-world exposure and cross-cultural experience.

The ECOBIT is especially committed to high-quality instruction. It is committed to research activities, which enhance the quality of instruction and contribute to both the applied and basic literature of business.

Committed to the economic vitality of the region, the ECOBIT engages in service activities that include opportunities for involvement of both faculty and students with the business community.

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## Vision Statement

The ECOBIT will be clearly recognized as having one of the premier business programs in the Commonwealth of Pennsylvania and surrounding states, while maintaining a global focus. This will be evidenced by the quality and breadth of its educational programs, the scholarly productivity of its faculty, and the service contributions to its regional business community.

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## Accreditations

AACSB International—The Association to Advance Collegiate Schools of Business—has accredited the undergraduate and graduate business degree programs offered by the ECOBIT. Business education programs are accredited by NCATE—National Council for Accreditation of Teacher Education. Accreditation shows that a school fulfills its mission, meets its objectives, and maintains the high standards set by AACSB International and NCATE. The outcome is managers and business educators who know how to think, communicate, solve problems, and provide leadership in the global marketplace.

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## Bachelor of Science Degree

For those pursuing the Bachelor of Science degree, IUP's training will provide a broad liberal background in the behavioral sciences; a keen perception

of the socioeconomic world in which we live and work; a foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business; and an opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement. There are eight Bachelor of Science degrees offered in business—Accounting, Business Technology Support, Finance, Human Resource Management, International Business, Management (concentrations in General Management, Operations Management, and Entrepreneurship and Small Business Management), Management Information Systems, and Marketing. Each program includes a variety of business and business-related courses designed to enrich the student's understanding of the modern business system.

A student may not pursue coursework in the ECOBIT with the expectation of graduating from the college unless he/she has been accepted as a degree candidate in the college.

Enrollment in all ECOBIT courses at the 300 and 400 level is restricted to students with junior or senior standing. All students, regardless of major or program affiliation, must meet course prerequisite requirements in order to enroll for a given course.

Students may, in consultation with their advisors, plan their program of study to obtain a minor in an area of business specialization other than their major or a related area outside the ECOBIT.

Students can also pursue a B.S. degree in all of the ECOBIT's majors and concentrations (except Business Education) by completing the first 75 credits of the IUP B.S. program at the campus of People's Education Society (PES) in Bangalore, India. Upon successful completion of these 75 credits, students can transfer these 75 PES credits to IUP and complete the remaining 45 credits at IUP and receive a B.S. degree in one of the majors offered by the ECOBIT at IUP. Contact the ECOBIT for further details.

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## Bachelor of Science in Education Degree

The college seeks to serve the needs of its students and the needs of business, industry, and education through its diverse programs. The Bachelor of Science in Education with a Business Education major is designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges.

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## Associate of Arts Degree

*In July 2010, the Associate of Arts degree with a major in Business was placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

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## Business Minors for ECOBIT Students

Minors in Accounting, Finance, Human Resources Management, Management Information Systems, and Marketing are offered only for students who are majoring in one of the other majors in the ECOBIT and assume the common 36-credit Business core.

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## Pre-Law Interdisciplinary Minor

Successful lawyers possess excellent skills in writing and speaking and can analyze a problem and explain its solution in clear, logical terms. The Pre-Law Interdisciplinary Minor prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination. This minor may be taken with any major in the ECOBIT. Although a pre-law minor is not required for law

school admission, this interdisciplinary minor will provide students with the prerequisite skills for law school. Interested students should contact the Department of Finance and Legal Studies.

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### **Pre-Law Interdisciplinary Minor** 21

Seven courses, including at least one from each of the seven areas (no courses with student's major prefix):

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 225

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Philosophy:* PHIL 101, 110, 222, 450

*Political Science:* PLSC 358, 359, 361

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### **Minor in Business Administration for Nonbusiness Majors**

The ECOBIT offers, as a joint effort of its departments, a 21-credit minor for nonbusiness majors. The program is designed to give nonbusiness majors a general background in business with 12 credits of prescribed Liberal Studies courses and 21 credits of required business courses.

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### **Minor–Business Administration (for nonbusiness majors) 21**

#### **Prescribed Liberal Studies:**

**Mathematics:** MATH 214 or 217

**Social Science:** ECON 121

**Liberal Studies Electives:** BTED/COSC/IFMG 101, ECON 122

#### **Required Business Courses:**

ACCT 201	Accounting Principles I	3cr	
ACCT 202	Accounting Principles II	3cr	
FIN 310	Fundamentals of Finance	3cr	
MGMT 310	Principles of Management	3cr	
MKTG 320	Principles of Marketing	3cr	

#### **Other Requirements:**

Two of the following courses with advisement:

BLAW 235	Legal Environment of Business	3cr	
BTST 321	Business and Interpersonal Communications	3cr	
IFMG 300	Information Systems: Theory and Practice	3cr	
MGMT 330	Production and Operations Management	3cr	

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### **ECOBIT Honors Program Track**

The ECOBIT Honors Program Track is a highly selective academic program of 30 credits that provides students with increased challenges and unique learning experiences. The program emphasizes special curricula, independent research, leadership opportunities, and student/faculty interaction that are necessary to develop fully those students who possess the capacity and motivation to excel. This honors program is particularly encouraged for students who intend to seek admission to graduate or professional schools. The program includes courses in the freshman through the senior years, and specifically consists of:

- Pairing of ECOBIT Honors students with faculty and businesspeople whose research goals coincide with student interests
- Freshman Business Honors course, which provides an advanced study opportunity in the freshman year
- Sophomore cluster, consisting of 6 credits that students take in a cohort
- Honors Junior Block, consisting of 18 credits that students take in a cohort
- Honors Business Policy class for graduating seniors

Admission to the honors program will be based on a holistic approach, including SAT scores, secondary school GPA, secondary school class rank, and a two-page self-statement describing the student's academic and career goals. Selection will be made by an ECOBIT Honors Selection Committee with representation from administration, faculty, and students.

To remain in the program, a student must maintain a cumulative 3.25 GPA and a 3.25 GPA in the business courses. The program requires 30 credits. Included in the 30 credits also are mentoring and service experiences. A

cohort will consist of twenty students, and no one will be admitted to the cohort after the sophomore year.

Other business majors who are not in the ECOBIT Honors program may, with the permission of the offering department chairperson, register for the honors section of the business courses, provided the students have a cumulative GPA of 3.25 and meet all the prerequisites for the course and provided that the section does not contain a full cohort.

Honors coursework is recorded on university transcripts, and students completing the ECOBIT Honors program will be recognized at departmental commencement ceremonies.

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### **ECOBIT Academic Policies**

#### **Academic Integrity Pledge**

ECOBIT continually strives to strengthen the integrity and ethical conduct of both students and faculty. Majors in the ECOBIT, therefore, are required to sign a student pledge of academic honesty. The purpose of the student pledge is to build trust among students and faculty while fostering an academic environment of shared values.

#### **Junior Standing**

To be accepted for junior standing a business major must have:

- Accumulated 60 credits or more of academic credit
- Achieved a minimum 2.0 cumulative GPA
- Successfully completed the following courses: ACCT 201, 202, BLAW 235, BTED/COSC/IFMG101, ECON121, 122, ENGL 101, 202, MATH 115, 214, PSYC101, and QBUS 215.

Business majors are required to have achieved junior standing before enrolling in 300- or 400- level courses in the ECOBIT. Students who have not completed the junior standing requirements, may, with permission from the dean or dean's designee, enroll in 300- or 400- level courses in ECOBIT; however, they may be expected to schedule courses during the winter and/or summer sessions in order to meet the requirements in a timely manner.

**Note to Business Majors:** All business core classes must be successfully completed before MGMT 495 Business Policy can be taken. No exceptions are being made. These classes include ACCT 201, ACCT 202, BLAW 235, BTST 321, FIN 310, IFMG 300, MGMT 310, MGMT 330, MKTG 320, and QBUS 215.

#### **Distribution Requirement**

All ECOBIT majors (except Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 60 credits) in nonbusiness\* coursework.

#### **Residency Requirement**

All of the college's majors (except Business Education) must take a minimum of 50 percent of their required business\* credits in IUP coursework. IUP credits earned by examination such as CLEP are counted toward IUP residency.

#### **Restriction for Nonbusiness Majors**

Students not majoring in business may count a maximum of 30 credits in business\* coursework toward the 120-credit-degree minimum. Business credits in excess of 30 will be permitted only as credits beyond the 120 for graduation.

\*For purposes of all policies above, "business" coursework consists of all ECOBIT courses except IFMG 101, QBUS 215, and courses in Business Education (BTED). ECON 334 is also treated as a "business" course. "Nonbusiness" coursework consists of all BTED courses, IFMG 101, QBUS 215, and all non-ECOBIT courses except ECON 334.

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### **The Internship and Corporate Relations Office**

This office houses the internship coordinator and corporate relations coordinator for the ECOBIT. IUP offers one of the largest business internships in Pennsylvania. Students can choose from a wide range of organizations to gain real-world experience while earning academic credit. The internship coordinator counsels students regarding internship prerequisites, procurement of the internship position, and scheduling to maximum benefit.

## Office of Student and Alumni Services

This office provides academic assistance to lower-division and probationary students and is directed by the assistant dean of the ECOBIT. Staff members are available to answer questions on the processes related to registration, change of major, removal of incompletes, grade appeals, etc.

## School of International Management

With the increasing demand for cross-cultural knowledge and international competence, the ECOBIT has committed itself to a comprehensive strategy of providing future business leaders with a global foundation so they may become the world-class managers of tomorrow. The School of International Management offers a rich program that will strengthen business students and provide regional businesses with personnel who have a global perspective and internationally competitive management skills. This global perspective is provided to students through broad exposure to cross-cultural coursework, integration of international concepts in selected business courses, direct exposure to individuals from other cultures, and a period of residency in another country.

## Business Advisory Council

Eberly College's Business Advisory Council is a select group of more than a hundred business leaders. The council helps the college in its educational and service mission through counsel and feedback on matters such as program objectives, curriculum development, program development and promotion, and recruitment and retention of students and faculty.

## College of Business Student Advisory Council

This council consists of the presidents and vice presidents of fourteen business student organizations. Its mission is to provide a representational body for the students of the ECOBIT. This is accomplished through representatives from each of the college's organizations in addition to business students. It provides a foundation for activities and functions with the college.

## ECOBIT Student Organizations

- Association of Management Information Systems
- Finance Association
- Graduate Business Student Association
- International Business Association
- Management Association
- Phi Beta Lambda
- Phi Gamma Nu
- Pi Omega Pi
- Society for Human Resources Management
- Student Accounting Association
- Student Internship and Career Association
- Student Managed Investment Portfolio
- Student Marketing Association
- Student Operations Management Association
- Student Technology Association

## Service Units

The **Management Services Group (MSG)** is a confederation of consulting units instituted in 1991 by the ECOBIT in support of ongoing and start-up businesses in the Indiana County region. An integral objective of the group is to provide educational opportunities through an ongoing schedule of seminars and workshops for local businesses. The MSG consulting units are listed below.

The **Indiana Small Business Development Center** offers free business consulting to existing and start-up businesses in the preparation of business plans. The staff helps pull together a business plan suitable for presentation to a bank. This includes working with the client to put together a complete set of financial projections.

The **Indiana County Small Business Incubator** was established in 1986 as a joint effort of IUP, the Indiana County commissioners, and several county and state agencies. The Ben Franklin Partnership has provided operational capital and other support services since the incubator's inception. The incubator provides small start-up businesses with consultation, services, and space.

The **Small Business Institute (SBI)** was established to assist existing small businesses with various types of problem resolution. Through the SBI, undergraduate and graduate business students work under close supervision of faculty members to assist clients with accounting systems, market studies, computer system installation, business planning, and operations management.

The **Government Contracting Assistance Program** helps area businesses identify and respond to federal and state requests for bids for products and services. The program is funded by the Department of Defense. Contract sales generated through this program add to the vitality of the local economy.

The **Center for Family Business** was designed to serve the unique needs of family-owned businesses. Issues such as performance compensation, establishment of an effective corporate board, conflict resolution, management of siblings and cousin teams, succession, and estate planning are critically important and virtually ignored by other educational forums. The center provides an educational program consisting of four meetings per year which focus on the topics outlined.

The **IUP ExcEL Center (Excellence in Entrepreneurial Leadership)** was established to enhance the culture of entrepreneurship, innovation, and new venture creation through IUP and the local community. The center provides students across all academic disciplines with opportunities to pursue an entrepreneurial path while continuing their education. The center allows IUP students to experience a full range of entrepreneurial experiences through delivery of undergraduate and graduate entrepreneurship coursework, student involvement in entrepreneurial activities, and entrepreneurial community outreach programs.

The **WEDnetPA GFT Program** provides for the training of Pennsylvania's workers for a growing economy. It offers a comprehensive collection of workforce skill development tools as well as a Workforce Learning Resource Center, specifically designed to serve business and industry. Employers can tap into the program for training and grant funding initiatives, advice for planning job training to meet company goals and objectives, the latest research on best industry practices, complete online and instructor-led training courses, and rental facilities.

## Department of Accounting

**Website:** [www.iup.edu/accounting](http://www.iup.edu/accounting)

**Germain P. Kline, Chairperson;** Anantharaman, Anderson, Bradwick, Rahman, Tickell, Woan; and professors emeriti Ghobashy, Robbins

Accounting majors receive instruction in financial reporting system design and analysis, managerial accounting, taxation, and nonprofit accounting leading to career opportunities in public, industry, and government accounting.

## Bachelor of Science—Accounting

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with ACCT prefix

**College: Business Administration Core** 33

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr



<b>Major: Accounting (1)</b>	27
<b>Required Courses:</b>	
ACCT 303 Financial System Analysis	3cr
ACCT 304 Intermediate Accounting I	3cr
ACCT 305 Intermediate Accounting II	3cr
ACCT 311 Cost Accounting	3cr
ACCT 401 Advanced Accounting	3cr
ACCT 421 Federal Tax I	3cr
ACCT 431 Auditing	3cr
<b>Controlled Electives:</b> Two courses from the following:	6cr
ACCT 412, 422, 432, 441, 451, 471, BLAW 336	

**Free Electives: (2)** 5  
**Total Degree Requirements:** 120

- (1) Students must meet the grade prerequisite(s) listed in the course description section of this catalog prior to advancing to the next course.
- (2) Distribution Requirement: All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 60cr) in nonbusiness coursework.

**Minor—Accounting (1)** 18  
(for Business Majors in the ECOBIT only)

<b>Required Courses:</b>	12
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
ACCT 303 Financial System Analysis	3cr
ACCT 304 Intermediate Accounting I	3cr
<b>Two courses from the following:</b>	6
ACCT 305 Intermediate Accounting II	3cr
ACCT 311 Cost Accounting <i>or</i>	
ACCT 300 Managerial Accounting	3cr
ACCT 421/422 Federal Tax I/Federal Tax II	3cr/6cr
ACCT 431/432 Auditing/Forensic and Internal Auditing	3cr/6cr

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

**Associate of Arts in Business Specializing in Accounting\***

The Associate of Arts degree with a major in Business Specializing in Accounting is designed with these objectives: 1) To provide business occupational education with the opportunity for specialization in the accounting area, 2) To enable the student to enter accounting positions in business and government, 3) To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.

After successfully completing the program, the student may apply for admission into a four-year baccalaureate program. Admission is not guaranteed. If accepted, all of the credits earned in the associate program will qualify towards the four-year degree program in accounting.

*\*In July 2010, the Associate of Arts degree with a major in Business was placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

**Department of Finance and Legal Studies**

**Website:** [www.iup.edu/financelegal](http://www.iup.edu/financelegal)

**Ibrahim Affaneh, Chairperson;** Ames, Boldin, Chaudhry, Eastman, Gart, Scudder, Troxell, Welker; and professor emeritus Ray

**Finance Major**

The Finance major, leading to a degree of Bachelor of Science, is designed to educate students who are interested in pursuing one of the many career opportunities within the areas of corporate and personal financial management, banking, insurance, other financial institutions, and investments.

The objective of the Finance program is to provide students with a broad base of knowledge, both theoretical and practical, as well as the analytical and technical skills necessary to build a successful career in an exciting and rapidly changing field.

**Legal Studies**

Legal Studies offers law and law-related courses with special emphasis on business applications. Legal Studies provides the student with a broad legal and ethical foundation necessary to a career in business or as preparation for pursuit of a law or law-related career.

**Pre-Law Interdisciplinary Minor**

This minor may be taken with any major in the ECOBIT. For more information, please see the Pre-Law Interdisciplinary Minor section on page 49 of this catalog.

**Bachelor of Science—Finance (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with FIN prefix

**College: Business Administration Core** 33

<b>Required Courses:</b>	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BLAW 235 Legal Environment of Business	3cr
BTST 321 Business and Interpersonal Communications	3cr
FIN 310 Fundamentals of Finance	3cr
IFMG 300 Information Systems: Theory and Practice	3cr
MGMT 310 Principles of Management	3cr
MGMT 330 Production and Operations Management	3cr
MGMT 495 Business Policy	3cr
MKTG 320 Principles of Marketing	3cr
QBUS 215 Business Statistics	3cr

**Major: Finance** 27

**Required Courses:**

FIN 315 Financial Analysis Using Electronic Spreadsheets	3cr
FIN 320 Corporate Finance	3cr
FIN 324 Principles of Investments	3cr
FIN 360 Insurance and Risk Management	3cr
FIN 410 Financial Institutions and Markets	3cr
FIN 422 Seminar in Finance	3cr

**Controlled Electives:**

Two courses from the following: ACCT 305, 421, BLAW 336, 440, FIN 350, 420, 424, 425, 481, 493, REAL 382  
One course from the following: ECON 325, 334, 345, 356

**Free Electives: (\*)** 5

**Total Degree Requirements:** 120

- (\*) Distribution Requirements: All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 60cr) in nonbusiness coursework.

**Minor—Finance (1)** 15  
(for Business Majors in the ECOBIT only)

<b>Required Courses:</b>	9
FIN 310 Fundamentals of Finance	3cr
FIN 320 Corporate Finance	3cr
FIN 324 Principles of Investments	3cr

**Controlled Electives:** 6  
 Two courses from the following:  
 FIN 315, 360, 410, 420, 424, REAL 382  
 (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major:** 21  
**Required Courses:**

ECON XXX	Any advanced 300-400-level ECON course	3cr
MGMT 300	Human Resource Management	3cr
MGMT 311	Human Behavior in Organizations	3cr
MGMT 428	Seminar in Management	3cr
MGMT 434	Quality Management	3cr
MGMT 451	International Management	3cr
MGMT XXX	Any one Management course	3cr

**Controlled Electives: (1)** 6  
 Students must select two advanced Business electives from 300-level courses or above. No more than 3cr of MGMT 493 may be used to meet this requirement.

**Free Electives: (2)** 5

**Total Degree Requirements:** 120

- (1) MGMT 275 will be considered an advanced business elective.
- (2) General Management track majors are required to take a minimum of 50 percent of their degree requirements—i.e., a minimum of 60crs—in nonbusiness coursework. The first 9cr of Economics (ECON 121, 122, and the elective, ECON 330 or 334) will be considered “nonbusiness” for purposes of this calculation. Given the foregoing, a minimum of 5cr of free electives must be taken in nonbusiness coursework by most Management Department majors.

### Bachelor of Science—Management/Operations Management Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

**College: Business Administration Core** 33

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major:** 27  
**Required Courses:**

ACCT 300	Managerial Accounting	3cr
MGMT 300	Human Resource Management	3cr
MGMT 434	Quality Management	3cr
MGMT 437	Supply Chain Management	3cr
MGMT 438	Seminar in Operations Management	3cr

**Controlled Electives:**

One course from the following: ECON 330, 334 3cr  
 Three courses from the following: ACCT 311, BTST 342, 9cr  
 IFMG 251, 350, MGMT 311, 400, 401, 481, 493,  
 MGMT/MKTG 350, MGMT/MKTG 432,  
 MKTG 420, 434, QBUS 380, 401, SAFE 101

**Free Electives: (1)** 5

**Total Degree Requirements:** 120

## Department of Management

**Website:** [www.iup.edu/management](http://www.iup.edu/management)

**Ramesh G. Soni, Chairperson;** Ali, Al-Shammari, Anderson, Ashamalla, Bharadwaj, Kosicek, Orife, Osborne, Slack, Wisnieski; and professor emeritus Falcone

Graduates holding the Bachelor of Science degree with a major in Management may find employment opportunities in both the public and private sectors. Opportunities are expected to be especially plentiful in the services sector (e.g., retailing, health care, information technology, finance, and transportation), where these degrees will be valuable.

The department offers three separate degree programs: Management, Human Resource Management, and International Business.

The Bachelor of Science degree with a major in **Management** offers three tracks in which students can concentrate: General Management, Operations Management, and Entrepreneurship and Small Business Management.

- **General Management Track.** While both management theory and application are taught in all of the department’s majors, the track is distinguished by its emphasis upon the achievement of organized goals through the efforts of organization members.
- **Operations Management Track.** Students in this track are well grounded in both theory and application, focusing on production, operations, quality issues, and inventory and capacity management.
- **Entrepreneurship and Small Business Management Track.** Students taking this track will focus on creation and operation of a small business. This track is also for graduates who will be working in small businesses where the manager often must perform several managerial roles and manage several functions.

The Bachelor of Science degree with a major in **Human Resource Management** prepares individuals in both the theoretical and applied aspects of managing the human resources function in organizations as a generalist or specialist. Students will gain expertise in areas such as job design, staffing, training, compensation, and performance appraisal.

The Bachelor of Science degree with a major in **International Business** offers students an opportunity to acquire a thorough understanding of managing global operations in the contemporary business environment. In addition, students develop skills in a traditional functional area (finance, human resources, marketing). The combination of these two objectives enables students to successfully perform in today’s competitive global economy.

### Bachelor of Science—Management/General Management Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

**College: Business Administration Core** 33

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr

(1) Operations Management track majors are required to take a minimum of 50 percent of their degree requirements—i.e., a minimum of 60cr—in nonbusiness coursework. The first 9cr of Economics (ECON 121, 122, and the elective, ECON 330 or 334) will be considered “nonbusiness” for purposes of this calculation. Given the foregoing, a minimum of 5cr of free electives must be taken in nonbusiness coursework by most Management Department majors.

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### Bachelor of Science—Management/Entrepreneurship and Small Business Management Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

**College: Business Administration Core** 33  
**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major:**

**Required Courses:** 27

ACCT 300	Managerial Accounting	3cr
MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 325	Small Business Management	3cr
MGMT 403	Small Business Planning	3cr
MGMT 492	Small Business/Entrepreneurship Internship	6cr
Major Area Restricted Electives		9cr

**Free Electives: (1)** 5

**Total Degree Requirements:** 120

(1) Entrepreneurship and Small Business Management track majors are required to take a minimum of 50 percent of their degree requirements—i.e., a minimum of 60cr—in nonbusiness coursework. The first 9cr of Economics (ECON 121, 122, and the elective, ECON 330 or 334) will be considered “nonbusiness” for purposes of this calculation. Given the foregoing, a minimum of 5cr of free electives must be taken in nonbusiness coursework by most Management Department majors.

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### Bachelor of Science—Human Resource Management

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

**College: Business Administration Core** 33  
**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr

MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major: Human Resource Management** 18

**Required Courses:**

ECON 330	Labor Economics	3cr
MGMT 300	Human Resource Management	3cr
MGMT 400	Compensation Management	3cr
MGMT 401	Management Development and Training	3cr
MGMT 402	Seminar in Human Resource Management <i>or</i>	3cr
MGMT 428	Seminar in Management	
MGMT 405	Organizational Staffing	3cr

**Controlled Electives:** Select three courses from the following: 9

ACCT 300, BTST 342, ELR 480, MGMT/MKTG 432, MGMT 311, 406, 434, 451, 452, 493, PSYC 390, 411, SAFE 101, SOC 340, 348, 362

**Free Electives: (1)** 5

**Total Degree Requirements:** 120

(1) Human Resource Management majors are required to take a minimum of 50 percent of their degree requirements—i.e., a minimum of 60cr—in nonbusiness coursework. The first 9cr of Economics (ECON 121, 122, and 330) will be considered “nonbusiness” for purposes of this calculation. Given the foregoing, a minimum of 5cr of free electives must be taken in nonbusiness coursework by most Management department majors.

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### Bachelor of Science—International Business

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Humanities:** PHIL 222

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101, ANTH 110/ANTH 211/GEOG 104/PLSC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MGMT prefix

**College: Business Administration Core** 33  
**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Foreign Language Requirement (1)** 0-9

**Foreign Residency Requirement (2)**

**Major: International Business**

**Required Courses:** 12

ECON 345	International Trade	3cr
MGMT/MKTG 350	International Business	3cr
MGMT 454	International Competitiveness	3cr
MGMT 459	Seminar in International Management	3cr

**Concentration area courses:** (select one concentration; choose three of the four courses in the chosen area) 9

**Finance Concentration:**

FIN 320	Corporate Finance	3cr
FIN 324	Principles of Investments	3cr

FIN 410	Financial Institutions and Markets	3cr
FIN 424	International Financial Management	3cr
<b>Human Resources Management Concentration:</b>		
MGMT 300	Human Resource Management	3cr
MGMT 400	Compensation Management	3cr
MGMT 402	Seminar in Human Resource Management	3cr
MGMT 452	Comparative Management	3cr
<b>Marketing Concentration:</b>		
MKTG 321	Consumer Behavior	3cr
MKTG 420	Marketing Management	3cr
MKTG 421	Marketing Research	3cr
MKTG 430	International Marketing	3cr
<b>Free Electives: (3)</b>		2-11
<b>Total Degree Requirements:</b>		120

- (1) Candidates must demonstrate a conversational proficiency in a foreign language. This requirement may be met by: (a) successful completion of 9 intermediate-level credits in a specific language, or (b) successful completion of an exemption or credit examination in lieu of the above. A foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, can meet the foreign language requirement by successful completion of an exemption examination in the acquired native language.
- (2) Candidates must document one semester of foreign residence (minimum of three months). Normally, the foreign residency requirement will be met in conjunction with a work experience, internship, or student exchange. A substitute cross-cultural experience may be permitted with the academic advisor's recommendation. The foreign language requirement is a prerequisite to the foreign residency requirement.
- (3) Distribution Requirement: All business majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 60cr) in nonbusiness coursework.

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**Minor–Management** **15**  
(for Business Majors in the ECOBIT only)

<b>Required Courses:</b>		9
ELR 480	Principles and Practices of Collective Bargaining	3cr
MGMT 300	Human Resource Management	3cr
MGMT 401	Management Development and Training	3cr
<b>Two courses from the following:</b>		6
ECON 330	Labor Economics	3cr
MGMT 402	Seminar in Human Resource Management	3cr
SAFE 101	Introduction to Occupational Safety and Health	3cr

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

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**Minor in Entrepreneurship for Fine Arts Students**

The minor in Entrepreneurship for nonbusiness majors program assumes no prior knowledge of business. Fine arts students are often involved in starting and running their own business, developing and starting small performing groups, and developing and running nonprofit community theaters. Students would develop the skills necessary to evaluate opportunities within their industry. They would learn, among other things, to (1) analyze their competition, (2) develop marketing and financial plans, (3) explain intellectual property rights, (4) negotiate contracts, and (5) write a business plan that could be used to obtain financing from banks, investors, or other sources of funding. These skills are all central to the creation and development of new ventures. This is a joint effort of four departments and represents an 18-credit minor for fine arts majors. The program is designed to give nonbusiness majors a general background in starting and running a small business.

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**Minor–Entrepreneurship for Fine Arts** **18**

ACCT 200	Foundations of Accounting	3cr
BTST 321	Business and Interpersonal Communications	3cr
MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 325	Small Business Management	3cr
MGMT 450	Case Studies in Arts Management	3cr
MKTG 311	Arts Marketing	3cr

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**Department of Management Information Systems and Decision Sciences**

**Website:** [www.iup.edu/mis-desci](http://www.iup.edu/mis-desci)

**Dr. Pankaj, Chairperson;** Albohali, Gu, Hyde, Nahouraii, Rodger, Wang, Wibowo; and professor emeritus Shildt

Management Information Systems prepares students for careers in computer-based information systems in organizational environments. Newer areas such as networking, cybersecurity, and user/manager involvement in the global business environment are integrated with the traditional skills of programming, analysis and design, database development, various architectures, and application development. Microprocessor technology, the mainframe environment, and client server applications are included, as well as an emphasis on business computing issues such as profitability, budgeting, collaboration, and project management. These adhere to standards for a balanced curriculum as promulgated by the Association for Information Systems (AIS), the technology-accrediting arm of the Association to Advance Collegiate Schools of Business (AACSB). AIS now comprises organizations such as AITP, SIMS, TIMS, ORSA, and ICIS.

Decision Sciences provides students with a knowledge of statistical and quantitative methods used to enhance the business decision process. The methodologies include linear programming, forecasting, simulation, stochastic process, queuing, and network models.

The department creates a learning process that instills in its graduates respect, integrity, excellence, and a commitment to lifelong learning. Internship experiences facilitate the student's entry into full-time employment in a rapidly changing technological environment.

The department welcomes minors for students who are majoring in other business programs. The minor program offers other business majors a technical enhancement to their area of interest, a necessity for today's business manager.

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**Bachelor of Science–Management Information Systems (\*)**

**Liberal Studies:** As outlined in Liberal Studies section 55  
with the following specifications:

**Mathematics:** MATH 115 (1)

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC 101, ECON 122, MATH 214 (2), no courses with IFMG prefix

**College: Business Administration Core** 33

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major: Management Information Systems** 21-22

**Required Courses:**

IFMG 210	Introduction to Front-End Business Applications	3cr
IFMG 230	Introduction to Back-End Business Applications <i>or</i>	3cr
COSC 220	Applied Computer Programming	4cr
IFMG 250	Business Systems Technology	3cr
IFMG/COSC 352	LAN Design and Installation	3cr
IFMG 390	Data Base Theory and Practice	3cr
IFMG 460	Analysis and Logical Design	3cr
IFMG 475	Project Management and Implementation	3cr

**Controlled Electives:**

Select any two courses from the following categories:

*Software Development:* COSC 110, 300, 304, 310,

COSC 344, 345, 362, IFMG 330

*Networks and Cybersecurity:* COSC 316, CRIM 321, 323,

COSC/IFMG 354, IFMG 368, 382, 480

*Database and Decision Support:* IFMG 455, 465,

QBUS 380, 401, 481

*Special Topics, Internships, and Seminars:* IFMG 481,

485, 493

**Free Electives:** 4-5

**Total Degree Requirements:** 120

(\*) Distribution Requirement: All Eberly College of Business and Information Technology majors (except those majoring in Business Education) must take a minimum of 50 percent of their degree requirements (i.e., at least 60cr) in nonbusiness coursework.

(1) MATH 115 or 121 or 123.

(2) MATH 214 or 216 or 217.

**Minor–Management Information Systems (1)** 15

(for Business Majors in the ECOBIT only)

**Required Courses:**

IFMG 210	Introduction to Front-End Business Applications	3cr
IFMG 230	Introduction to Back-End Business Applications	3cr
IFMG 300	Information Systems: Theory and Practice	3cr (2)

**Controlled Electives:** (3) 6cr

Select 6cr from any IFMG courses except IFMG 101 and 201

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.
- (2) IFMG 300 is both a core course and requirement for the minor.
- (3) MIS minor should include a concentration in all IFMG courses. As a result, QBUS courses will not be counted towards the minor.

**Department of Marketing**

**Website:** [www.iup.edu/marketing](http://www.iup.edu/marketing)

**Parimal S. Bhagat, Chairperson;** Batra, Bebko, Byramjee, Garg, Krishnan, Sciulli, Sharma, Taiani; and professor emeritus Weiers

The Bachelor of Science degree with a major in Marketing program is designed to prepare its majors for a wide range of careers in private and public sector marketing, including sales management, retailing, brand management, advertising, distribution and logistics, customer relationship management, marketing research, public relations, marketing for nonprofit organizations, e-commerce, and international marketing. The program focuses on integrating technical knowledge in all areas of marketing with analytical and communication skills to prepare students for the challenges of the global competition in the twenty-first century.

**Bachelor of Science–Marketing (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with MKTG prefix

**College: Business Administration Core** 33

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major: Marketing**

**Required Courses:** 12

MKTG 321	Consumer Behavior	3cr
MKTG 420	Marketing Management	3cr
MKTG 421	Marketing Research	3cr
MKTG 422	Seminar in Marketing	3cr

**Controlled Electives:** Five courses from the following: 15

MGMT/MKTG 350, MKTG 430, 431, 432, 433, 434, 435, MKTG 436, 437, 438, 439, 440, 441, 481 (3cr max), MKTG 482 (3cr max), 493 (3cr max), a maximum of two (6cr) senior-level non-MKTG prefix courses from complementary areas (such as ACCT, COMM, ECON, GEOG, JRNL, IFMG, MATH, MGMT, PSYC, etc.) to meet individual student program and career preparation needs (with advisor permission)

**Free Electives:** (Maximum of 5cr in nonbusiness courses) 5

**Total Degree Requirements:** 120

(\*) If the student graduates with no more than a maximum of 120cr, no more than 50 percent, or 60cr, can be business-related courses. BTED/COSC/IFMG 101, QBUS 215, and all ECON courses are considered nonbusiness.

**Minor–Marketing (1)** 15

(for Business Majors in the ECOBIT only)

**Required Courses:**

MKTG 320	Principles of Marketing	3cr
MKTG 321	Consumer Behavior	3cr
MKTG 420	Marketing Management	3cr
Two additional MKTG courses		6cr

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

**Department of Technology Support and Training**

**Website:** [www.iup.edu/technologysupport](http://www.iup.edu/technologysupport)

**LeAnn Wilkie, Chairperson;** Ali, McPherson, Mensch, Moore, Willis; and professors emeriti Bianco, Brandenburg, Mahan, Morris, Polesky, Rowell, Steigmann, Woomer

This department offers the following degrees: Bachelor of Science in Education with a Business Education major, Bachelor of Science with a major in Business Technology Support, and a two-year Associate of Arts degree in Business with a Computer and Information Technology emphasis.

## **Business Technology Support Major (Bachelor of Science)**

The Business Technology Support majors are equipped to be versatile professionals. The program encompasses the knowledge, skills, and attitudes required of a professional who provides support to users of information technology to maintain and improve overall organizational effectiveness. This program places emphasis on understanding how technology contributes to individual and work group performance and to behavioral factors, such as communications, ergonomics, training, and change.

The curriculum is designed to challenge students to understand their dynamic role from both an organizational and individual viewpoint. Graduates of the program can pursue career paths such as website managers, technology trainers, help desk administrators, e-business designers, local area network administrators, and documentation/curriculum developers as they relate to enterprisewide solutions, support services, and technology training.

The department welcomes minors. A minor provides Business majors with the opportunity to complement their major with business technology support courses.

## **Business Education Major (Bachelor of Science in Education)**

The IUP Business Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and Pennsylvania teacher certification in business, computer, and information technology for grades K-12.

The program in business education is dedicated to preparing teachers who will be qualified and certificated to instruct students to live and work in a business environment. In 2000, the business education program was honored as the nation's outstanding program by the Association for Career and Technology Education.

The major is intended for those interested in teaching in public elementary, junior/middle, and senior high schools, vocational-technical schools, private business schools, or industry. Students have a choice of the following certification areas: business, computer, and information technology; or marketing education.

A minimum GPA, in accordance with Pennsylvania standards, is required to apply for admission to teacher education, to take major courses in the department, and to student teach. See details of the IUP 3-Step Process in the section "3-Step Process for Teacher Education" in the College of Education and Educational Technology section of this catalog (also see the Department of Technology Support and Training Student Handbook). The candidates for certification must also complete successfully the core battery and specialization sections of the Praxis examinations.

Before graduation, each business education student must document completion of 500 hours of business work-related experience. This experience can be acquired during summer vacations and in offices on the campus during the regular school term. Previous documented experience may also be counted.

## **Bachelor of Science in Education–Business Education (\*) (1)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 115

**Natural Science:** Option I recommended

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 6cr, ECON 122, MATH 214, no courses with BTED prefix

**College: Professional Education Sequence:** 31

BTED 411	Methods in Business and Information Technology I	3cr
BTED 412	Methods in Business and Information Technology II	3cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr

EDSP 102	Educational Psychology	3cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 441	Student Teaching	12cr
EDUC 442	School Law	1cr

**Major:** 42

### **Required Courses:**

**Business Administration Core:** 27cr

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

### **Business, Computer, and Information**

**Technology Certification:** 15cr

BTED/COSC/IFMG 101	Computer Literacy	3cr
BTED 470	Technology Applications for Education	3cr
BTST 105	Introduction to Business	3cr
BTST 383	Microcomputer Software Solutions	3cr
BTST 401	Web Design	3cr

(#) **Total Degree Requirements:** 124

(\*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Educational Technology section of this catalog.

(1) Students can transfer credit from another regionally accredited institution.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

## **Bachelor of Science–Business Technology Support**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214, no courses with BTST prefix

**College:** 33

### **Required Courses: Business Administration Core**

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BLAW 235	Legal Environment of Business	3cr
BTST 321	Business and Interpersonal Communications	3cr
FIN 310	Fundamentals of Finance	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 310	Principles of Management	3cr
MGMT 330	Production and Operations Management	3cr
MGMT 495	Business Policy	3cr
MKTG 320	Principles of Marketing	3cr
QBUS 215	Business Statistics	3cr

**Major:** 30

### **Required Courses:**

BTST 273	Hardware Support Solutions	3cr
BTST 310	Telecommunications	3cr
BTST 383	Microcomputer Software Solutions	3cr
BTST 411	Technology Support Development	3cr
BTST 413	Enterprise Technology Support	3cr
BTST 442	Training Methods in Business and Information Technology Support	3cr

BTST 480	Seminar in Business Technology Support	3cr
COSC/IFMG 352	LAN Design and Installation	3cr
<b>Controlled Electives:</b> Two 3cr courses from the following:		6cr
BTED 201	Internet and Multimedia	
BTST 401	Web Design	
BTST 402	Website Development and Administration	
BTST 493	Internship	
COSC 110	Problem Solving and Structured Programming	
COSC 304	Interactive Internet Programming with Java	
<b>Free Electives:</b> (1)		2
<b>Total Degree Requirements:</b>		120

- (1) Business Technology and Support majors are required to take a minimum of 50 percent of their degree requirements—i.e., a minimum of 60cr—in nonbusiness coursework. ECON 121 and 122 will be considered “nonbusiness” for purposes of this calculation.

**Minor–Business Technology Support (1)** **18**  
(for Business Majors in the ECOBIT only)

**Required Courses:**

BTST 273	Hardware Support Solutions	3cr
BTST 310	Telecommunications	3cr
BTST 383	Microcomputer Software Solutions	3cr

**Three courses from the following:**

BTST 401	Web Design	3cr
BTST 402	Website Development and Administration	3cr
BTST 411	Technology Support Development	3cr
BTST 413	Enterprise Technology Support	3cr
BTST 442	Training Methods in Business and Information Technology Support	3cr

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

**Associate of Arts Degree\***

Offering specialization in computer and information technology (CIT), the Associate of Arts degree with a major in Business\* is designed to be a two-year curriculum with these objectives:

1. To provide business occupational education with the opportunity for specialization in CIT.
2. To enable the student to enter CIT positions in business and government.
3. To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.
4. To provide the foundation to continue education in a four-year degree program. This program is offered at the Indiana campus only.

*\*In July 2010, the A.A. degree with a major in Business was placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

**Tech Prep**

The department has signed articulation agreements with high schools throughout Western Pennsylvania. Graduates of these approved programs have the opportunity to schedule advanced courses and develop higher-level skills to enhance employment options. For additional information, contact the department secretary at 724-357-3003.

# The College of Education and Educational Technology

A. Keith Dils, Interim Dean 

Joseph W. Domaracki, Interim Associate Dean for Teacher Education

Edward W. Nardi, Associate Dean for Academic Affairs

Lloyd Onyett, Assistant Dean for Information and Communications Technology

Laurie N. Nicholson, Dean's Associate

Website: [www.iup.edu/education](http://www.iup.edu/education)

Since its founding in 1875 as the Indiana Normal School, Indiana University of Pennsylvania has been widely recognized for its excellent programs in teacher education. Although the scope of the university has been greatly expanded, the College of Education and Educational Technology continues the tradition of preparing outstanding teachers to serve the students of the commonwealth and the nation.

The college comprises eight multidimensional departments and one center which offer twenty-five programs leading to the bachelor, master, and doctoral degrees. Included in the college are Adult and Community Education, Communications Media, Counseling, Developmental Studies, Educational and School Psychology, Professional Studies in Education, Special Education and Clinical Services, Student Affairs in Higher Education, and the Center for Career and Technical Personnel Preparation.

The college is well known for its opportunities to practice “hands-on” learning. Over five hundred students enjoy early field experiences each semester. In addition, the college places about five hundred student teachers each year in public schools which provide a full semester of supervised teaching experience. Students are encouraged to take advantage of a full range of activities offered in urban, rural, and multicultural settings.

Practical experiences are important for students majoring in communications media. Students in this program are prepared in one of the largest internship programs in Pennsylvania. They select supervised work experiences with agencies throughout the commonwealth and neighboring states; many students are so successful in their internship placements, they are hired immediately upon graduation.

## Mission Statement

The college provides leading-edge development and growth opportunities for students and professionals in education and allied fields.

## Vision Statement

The college will be known nationally and internationally for the preparation of practitioners in education to serve a global society. The college will be prepared to serve a clientele of graduate and undergraduate scholars from increasingly diverse backgrounds. Teacher scholars will apply diversified delivery systems to instruction, research, and service to meet the contemporary societal challenges.

## Degree Requirements

All bachelor degree candidates must satisfactorily complete a minimum of 120 credits to include all Liberal Studies and major requirements. All Bachelor of Science in Education degree candidates must also complete the IUP 3-Step Process for Teacher Education as defined by Chapter 354 of the Pennsylvania Education Code and in accordance with university policies.

## Associations and Organizations

- American Association of Colleges of Teacher Education (AACTE)
- American Association of Health and Physical Education (AAHPE)
- American Society for Training and Development (ASTD)
- American Speech-Language-Hearing Association (ASHA)
- Association for Childhood Education International (ACEI)
- Council for Accreditation of Counseling and Related Educational Programs (CACREP)
- Council for Exceptional Children (CEC)
- Council of Education of the Deaf (CED)
- National Association for the Education of Young Children (NAEYC)

- National Association of School Psychologists (NASP)
- National Broadcasting Society (NBS)
- National Council for Accreditation of Teacher Education (NCATE)
- National Council of Social Studies
- National Council of Teachers of Mathematics
- National Council of Teachers of English
- National Middle School Association (NMSA)
- Pennsylvania Department of Education (PDE)
- Teacher Education Council of State Colleges and Universities (TECSCU)

## Undergraduate Degrees, Majors, Minors, and Concentrations

- **Bachelor of Science:** Communications Media, Disability Services, General Studies
- **Bachelor of Science in Education:** Deaf Education, Early Childhood Education/Special Education, Middle-Level Education 4-8 with Mathematics or with English/Language Arts Specialization, Speech-Language Pathology and Audiology, Vocational/Technical Education
- **Associate of Arts:** General Studies
- **Minors:** Communications Media, Deaf Studies, Educational Psychology, Educational Technology, Special Education
- **Track:** College of Education and Educational Technology Honors Track
- **K-12 and Secondary Education Programs:** Art Education, Biology Education, Business Education, Chemistry Education, Earth and Space Science Education, English Education, Family and Consumer Sciences Education, Health and Physical Education, Mathematics Education, Music Education, Physics Education, Social Studies Education (Anthropology, Economics, Geography, History, Political Science, Sociology), Spanish Education

## Graduate Programs

- **Master of Education:** Business Education/Workforce Development, Education of Exceptional Persons, Educational Psychology, Elementary and Middle School Mathematics Education, Literacy, Master's in Education, School Counseling
- **Master of Arts:** Adult and Community Education, Adult Education and Communications Technology Track, Community Counseling, Student Affairs in Higher Education
- **Master of Science:** Speech-Language Pathology
- **Doctor of Education:** Administration and Leadership Studies, Curriculum and Instruction, School Psychology
- **Doctor of Philosophy:** Communications Media and Instructional Technology
- **Graduate-Level certifications:** Reading Specialist, School Psychologist, Elementary/Secondary Principal, Superintendent's Letter of Eligibility, Supervisor-Pupil Personnel Services K-12

Information describing master's and doctoral programs in education may be found in the current issue of the *Graduate School Catalog*.

## Honors Track, College of Education and Education Technology

The Honors Track enables students to participate in advanced study in the areas of learning and instructional theory, motivation to learn, assessment of student learning, classroom management, and the psychology of adolescent education. The honors track is encouraged for exceptional students in all fields of education. Honors coursework is recorded on university transcripts, and students completing the Education Honors Track will be recognized at departmental commencement ceremonies.

**Eligibility and Requirements:** This track is open by permission to all Education majors. To apply, an application should be filed with the Educa-



tional and School Psychology Department chairperson. Students may apply upon acceptance to IUP, or current students may make application following completion of one semester of coursework. Applicants must have a minimum 3.25 GPA in total university or high school coursework to apply. Students accepted prior to taking EDSP 102 complete EDSP 102/H/; 477/H/; two of the following electives: EDSP 373/H/, 376/H/, or 378/H/; and 493/H/. Students accepted following completion of a nonhonors section of EDSP 102 will be required to take all three of the courses offered (EDSP 373/H/, 376/H/, and 378/H/) in addition to 477/H/ and the Honors Internship. Students must earn at least a B in each course completed for the track to proceed and maintain a 3.25 cumulative GPA. To determine how Honors Track courses will be integrated into existing requirements for their major, students should consult their advisors.

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## College of Education and Educational Technology Honors Track

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### Required Courses:

EDSP 102/H/	Educational Psychology	3cr
EDSP 477/H/	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDSP 493/H/	Educational Psychology Honors Internship	1cr
Two or three courses from the following: (1)		
EDSP 373/H/	Psychology of Adolescent Education	3cr
EDSP 376/H/	Behavior Problems	3cr
EDSP 378/H/	Learning	3cr

- (1) Students accepted following completion of a nonhonors section of EDSP 102 are required to take all three of the courses offered. Students who complete EDSP 102/H/ are required to take two of the three courses offered.

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## Change of Major to a Teacher Education Program

Currently enrolled students who wish to make application for a teacher education program may get an application for a Change of Major from the college dean's office or department that houses the major. Secondary education programs are housed in the college of their respective discipline. A minimum cumulative GPA of 3.0 is required for all education majors by Chapter 354 of the Pennsylvania Education Code.

Students wishing to be considered as Early Childhood Education/Special Education and Middle-Level Education 4-8/Mathematics Specialization majors must submit with their application documentation of their successful completion of Praxis I (PPST). Applications will be reviewed three times a year beginning the third Monday of September, February, and June. Students approved for a Change of Major will be notified in writing within fourteen business days. Students admitted to the new major will be advised by a faculty advisor in the major and permitted to register for major courses during the next registration period.

Change of Major applications must be submitted to the appropriate department chairperson. Applications are reviewed by the chairperson and/or teacher education coordinator. The recommendation is then forwarded to the college dean's office for final review and action. Students must also comply with the IUP 3-Step Process for Teacher Education as appropriate to their current status. This information can be viewed on the College of Education and Educational Technology website at [www.iup.edu/education](http://www.iup.edu/education).

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## IUP 3-Step Process for Teacher Education

### Step 1. Application for Teacher Education

Eligibility requirements for enrolling in the professional education sequence which includes EDEX 300/301, EDUC 242, 342, 442, EDSP 477:

- A minimum of 48 credits and a 3.0 cumulative GPA
- Successful completion of Praxis I Examinations (PPST) with the minimum score established by the Pennsylvania Department of Education (PDE)
- Completion of the following courses as defined by the major with a grade of C or higher: ENGL 101, 121,\* EDSP 102, COMM 103,\* 6 credits in Math\* (\*See major for specific program requirement)

- Act 34/Act 151 Clearances and Act 114 Federal Fingerprinting (Continuing enrollment in IUP Teacher Preparation Program is required for clearances to remain valid)
- Completion of speech, hearing, and TB test
- Proof of Liability Insurance (annual update required)—PSEA membership or private insurance (must have a minimum of \$1,000,000 per claim/aggregate of \$3,000,000 per occurrence if obtained via private insurance)
- Satisfactorily completed essay
- Reviewed evidence of starting an electronic portfolio to include CD and portfolio evaluation
- Advisor's recommendation and signature

IUP Education majors are encouraged to take the Praxis I as soon as they are prepared for the exams. Extensive review materials and specialized workshops are available. Students who are not successful after two attempts are required to meet with the associate dean for Teacher Education for a consultation.

### Step 2. Application for Student Teaching

Eligibility requirements for student teaching placement:

- Successful completion of Step 1
- A 3.0 cumulative GPA
- Successful completion of Praxis II Examination. Scores must meet PDE requirements at the time the candidate makes application for teacher certification
- Act 34 and Act 151 (annual update required)
- Proof of liability insurance (annual update required)—PSEA membership or private insurance (must have a minimum of \$1,000,000 per claim and an aggregate of \$3,000,000 per occurrence if obtained via private insurance). Effective August 31, 2006.
- Completion of all major courses, methods courses, and liberal studies sciences courses with a grade of C or higher
- Updated electronic portfolio review to include CD and portfolio evaluation
- Advisor's recommendation and signature

### Step 3. Application for Graduation and Pennsylvania Teacher Certification

Eligibility requirements for graduation:

- Successful completion of Step 2
- Successful completion of student teaching
- A 3.0 cumulative GPA
- Final approval of electronic portfolio to include CD and portfolio evaluation
- Completed teacher work sample
- Completed application for graduation
- Completed application for Pennsylvania Teacher Certification
- The recommendation of student's academic advisor
- The recommendation of the IUP Teacher Certification Officer

### Appeal Provision

A student who believes that any requirement of this policy has been inequitably applied or that he/she merits special consideration may appeal through the proper sequence of channels: academic advisor, chairperson, and finally the associate dean for Teacher Education. Appeals must be made before the end of the next regular academic semester following the application.

Every effort should be made to resolve the appeal through the described process. If, at the conclusion of the appeals process, the student is still in disagreement with the findings, the student may request review before the Teacher Education Appeals Committee of the Academy for Teacher Preparation. The committee will be composed of three members representing the faculty of the Academy for Teacher Education Preparation, the Teacher Education Coordinator's Council, and senior teacher preparation students.

To initiate an appeal, the student must file a form obtained at the Office of the Associate Dean for Teacher Education. Appeals will be heard only during the regular academic semester. The student will be expected to submit written documentation of his/her complaint about the process of review for continuation or eligibility in the teacher education program. The committee will review the materials and make its recommendation to the associate

dean for Teacher Education. A final decision rests with the associate dean for Teacher Education, who is the certification officer.

## Federal Higher Education Act Title II

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This act requires all institutions that educate teachers to publish annually the passing rates on Praxis tests for their Program Completers. The annual report for IUP can be found at the website [www.iup.edu/education](http://www.iup.edu/education).

## Student Teaching

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Student teaching is designed to be the culminating learning experience for prospective teachers. Student teachers practice teaching and managing a classroom under the supervision of a full-time master teacher in an off-campus center. A university supervisor is assigned to work with individual student teachers and their cooperating master teachers. To gain admission to student teaching, applicants must have achieved a minimum cumulative GPA of 3.0. In addition, students must complete all requirements of the 3-Step Process and should complete all other components of the Liberal Studies and professional core before student teaching. Some programs have standards above the minimum 3.0 cumulative GPA and/or course grade expectations above the minimum grade of C. Each student should counsel with his/her advisor for information about specific program requirements related to qualification for student teaching. He or she should also check the College of Education and Educational Technology web pages regularly for the most current information ([www.iup.edu/education](http://www.iup.edu/education)).

Student teaching is the capstone experience in the program of the emerging professional educator. Student teaching assignments are the responsibility of the university. To avoid conflicts of interest, students will normally not be assigned to districts from which they graduated or to districts in which they permanently reside or to schools in which an immediate family member is employed. Exceptions to this policy may be made in large urban school districts such as Pittsburgh and Philadelphia where there are numerous elementary and secondary schools so avoidance of assigning student teachers to their "home school area" can be achieved. Any exception to this policy must be approved by the dean, College of Education and Educational Technology, or his/her designee. All official policies and procedures, regarding the student teaching experience, are included as part of the college's official Handbook for Student Teaching. Copies of the handbook are available for purchase at the Co-op Bookstore. The handbooks are also available for download as part of the Teacher Education website at [www.iup.edu/teachereducation](http://www.iup.edu/teachereducation).

All teacher education programs leading to a certificate issued by the Pennsylvania Department of Education require that candidates complete field placements including student teaching in a school setting or intermediate unit. Under current law, no placement can be made until a candidate presents Pennsylvania Criminal Record (Act 34) and Child Abuse Clearances (Act 151), as well as Act 114 (FBI Fingerprinting Record). Candidates for these programs should be aware that some districts or intermediate units may not accept placements if any criminal record is reflected on these background checks. Candidates with a criminal record, even a summary offense, are asked to disclose this history to their program upon entry so that a determination can be made about whether placement will be possible. Some serious offenses, typically involving child welfare, preclude state certification. Students who do not provide the required background checks or for whom the Teacher Education Office cannot find an acceptable placement will be terminated from the program. Copies of candidate clearances must be on file with the Teacher Education Office prior to the student's beginning any school or intermediate unit placement.

## Field Placements

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The Office of Teacher Education determines final placements for all fieldwork conducted in the public schools. In accordance with university policy, students must be officially enrolled in the course for which the fieldwork is being done. Students entering a classroom without being duly registered are in violation of university policy and may place themselves at risk legally. Therefore, registration for all field placements is mandatory and requires payment of a \$100 placement fee.

All official policies and procedures for field experiences are included as part of the Field Experience I and II handbook, which can be purchased at the local Copies Now store. The handbooks are also available for download as part of the Teacher Education website at [www.iup.edu/teachereducation](http://www.iup.edu/teachereducation).

## International Student Teaching Opportunities

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IUP students enrolled as teacher education majors in most certification areas are eligible to participate in a half-semester student teaching abroad program. Early Childhood Education/Special Education majors may not participate in international student teaching assignments. Students participate in this program during the semester in which they register to student teach, either in the fall or the spring. They are assigned to a teaching site in the United States for the first half of the semester. The second half of the student teaching experience is completed in an overseas site. The program provides students with teaching experiences in one of the following countries: Copenhagen, Denmark; London, England; Worcester, England; Paris, France; Malahide, Ireland; and Gronigen, The Netherlands. Teaching assignments are made for most certification areas.

Students wishing to participate in this program must have a cumulative GPA of 3.0 or better and a GPA of 3.0 or better in the professional core subjects and the major. The student teacher must demonstrate competency in effective classroom teaching practices, receiving a minimum grade of B in the midsemester evaluation. Upon approval of the IUP supervisor, the international student teaching assignment is confirmed.

In addition to IUP tuition and fees, students must pay a study abroad fee of \$1,000. Travel costs, personal expenses, and living accommodation costs for room/board (paid to the host family) are the responsibility of the student. Living accommodations are arranged with host families near teaching sites. A minimum number of interested students may be required.

Applications may be made anytime; however, preference is given to students who submit application materials one year before they student teach. Interviews for tentative acceptance will be scheduled with the international Student Teaching Committee two semesters prior to student teaching. For more information, contact the Department of Professional Studies in Education at 724-357-2400.

## Removal of a Student Teacher from a Student Teaching Placement

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The policy for the removal of a student teacher from a student teaching placement can be found at the website [www.iup.edu/education](http://www.iup.edu/education).

## Certification Requirements

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College of Education and Educational Technology requirements for recommendation for certification as a teacher, as well as the intermediate steps leading to commonwealth certification, are outlined in the 3-Step Process. The requirements include:

- a minimum grade of C in all professional education courses and a 3.0 cumulative GPA
- review and recommendation by the major academic advisor indicating completion of all university and departmental teacher education requirements
- completion of student teaching with a minimum grade of C
- successful completion of the Praxis I, Praxis II, and Praxis Specialty Area Tests
- successful completion of PDE Form 430
- competency in working with students with special needs (Special Education)
- completion and submission of electronic portfolio, including CD and portfolio evaluation

Applications for certification cannot be processed until the student completes the B.S.Ed. degree or its equivalent.

## Commonwealth Requirements for Teacher Certification

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(Excludes Vocational Instructional Certification. See "Center for Career and Technical Personnel Preparation.")

Certification standards for commonwealth public school teachers are established by the Pennsylvania Department of Education and the Pennsylvania Board of Education. The academic advisor of the student's major department must verify for the dean of the College of Education and Educational Technology that all academic requirements are met. The student's name is then placed on the graduation list.

Applicants for certification must sign a statement attesting to United States citizenship. Applicants who are not citizens must have an immigrant visa which permits them to seek employment within the United States, and they must have declared the intent to become citizens of the United States. Applicants must also submit a physical examination report and certify they are not in the habit of using narcotic drugs in any form, do not use excessive amounts of intoxicating beverages, are not currently under indictment by legal authorities, and have not been convicted of a criminal offense.

Applicants who are unable to meet one or more of these requirements must submit a full explanation with the application. In addition, they must attest to the fact that all information supplied in the application is accurate.

The Pennsylvania Department of Education issues an Instructional I certificate to beginning teachers upon graduation from and recommendation by the College of Education and Educational Technology.

### **Professional Certification Application Fee**

All applicants for Teacher Certification or Professional Education Certifications from the Commonwealth of Pennsylvania through IUP will be assessed a \$160 application fee. Applicants for add-on and second certifications processed through IUP will also be assessed this fee. Requests for processing out-of-state teacher certification applications will be assessed a \$35 processing fee per request.

### **Changes in Pennsylvania Standards for Teacher Certification**

The State Board of Education adopted changes that affect all of Pennsylvania's teacher and educational specialist certification programs by adding 9 credits or 270 hours or equivalent combination for adaptations and accommodations for diverse students in an inclusive setting and 3 credits or 90 hours or equivalent combination to meet the instructional needs of English Language Learners. Although these regulatory changes became effective on September 22, 2007, the Pennsylvania Department of Education has not yet developed *final* requirements for colleges/universities to follow. Therefore, additional program requirements will be developed and incorporated into a candidate's certification program to comply with new regulations for certifying teachers that become effective on January 1, 2013.

The State Board of Education also adopted changes specific to early childhood, elementary (K-6), and special education. New certification guidelines will apply January 1, 2013, regardless of a candidate's enrollment date. Candidates seeking current certifications must complete their programs by December 31, 2012.

### **Centers and Clinics**

The six centers and one clinic supported by the college offer a variety of services to the university community and citizens of the Commonwealth of Pennsylvania to include diagnostic testing, remedial services, assessment, and instruction.

The **Speech, Language, and Hearing Clinic** is staffed by speech-language pathology faculty and supervised graduate students working toward advanced degrees in Speech-Language Pathology. Using state-of-the-art equipment, clinic personnel provide diagnosis of speech problems and hearing tests and evaluations, as well as a regular program of therapy for clients. As part of this program, clinic staff members provide testing and necessary therapeutic services to all teacher education candidates, who must meet strict speech and hearing clearances. Regularly enrolled students at IUP, including all teacher certification candidates, are eligible to receive these services without charge.

The **Child Study Center** provides opportunities for School Psychology graduate students in the post-master's certification and doctoral programs to acquire professional skills under the supervision of certified faculty supervisors. Clinic personnel provide psychoeducational assessment for

children and adolescents with learning and/or behavior problems. They also provide consultation for parents and public school personnel involved with these children.

The **Center for Rural Gifted Education** offers educator training, resources, and consultation for gifted and high-ability students in rural Pennsylvania and their families. Assessment and child/family counseling are provided in conjunction with the IUP Child Development Center. This center is supported by faculty from the departments of Special Education and Clinical Services and Educational and School Psychology.

The **Literacy Center**, housed within the Department of Professional Studies in Education, provides opportunities for graduate students in the M.Ed. in Literacy program to gain experience toward a Reading Specialist Certification. The center offers assessment and instruction in reading and writing for children and adolescents. These instructional sessions are offered in the fall, spring, and summer terms. Family literacy services are also available.

The **Center for Counselor Training and Services (CCTS)** seeks to advance the knowledge base of undergraduate and graduate students as well as mental health professionals through the promotion and creation of professional trainings. The center is staffed by faculty members from the Department of Counseling. To successfully implement its mission statement, the CCTS has been established with the following goals in mind: 1) organize regularly scheduled professional trainings on mental health and educational topics relevant to the counseling profession; 2) offer opportunities for mental health professionals and educators in the region to learn from nationally and internationally recognized leaders and educators in the counseling profession; 3) enable the Department of Counseling to enhance its relationships and professional reputation with students, other IUP departments, professionals in the region, alumni, internship supervisors, and national leaders; 4) provide consultation services for school districts and counseling agencies; and 5) create and offer literature (pamphlets and books) and audiovisual products for educators and mental health professionals.

### **Specialized Instructional Facilities**

The **Audio Studio** has multi-track analog recording and digital capabilities. Students are able to digitally master professional-quality tracks. Both analog and digital facilities are housed in sound-dampened studios and supplemented by radio production and recording studios for medium- and small-group recording sessions.

The **Advanced Audio Lab** includes five digital audio workstations with professional-grade audio monitors, converters, and software supporting up to 192 tracks of CD and DVD quality audio. The stations are linked with a state-of-the-art analog/digital network enabling audio sources to be shared across stations. In addition, the lab includes various microphones and musical instruments to support recording projects.

The **Full Body Motion Capture/Digital Effects Lab** includes the equipment to support full body motion capture for multiple actors. This includes specialized capture hardware and software, supplemental motion management and conversion software, 3-D rendering software and hardware, and additional data transmission and storage hardware and devices.

The **Graphics Multimedia Lab**, located on the ground floor of Stouffer Hall, provides a variety of software applications, black-and-white and color printing capabilities, color scanner, and a negative film scanner. The facility is used for instruction in graphics, as well as multimedia production. Software applications available in the lab include Macromedia Fireworks, Adobe Photoshop, Adobe Illustrator, and Macromedia Authorware.

The **Photography Studio** provides industry-standard photography studio equipment for students to create photographs in custom-controlled environments.

The **Portfolio Assistance Center** offers assistance in the completion of the electronic portfolio. The staff can assist in the use of the scanners, digital cameras, and video-editing hardware and software. A wealth of other software programs is available, along with workshops to assist with the digital portfolio.

The **Radio Station** at IUP, WIUP-FM, is a 1600-watt, noncommercial, student-operated facility. Students from a variety of majors volunteer as DJs and news and sports staff members. There are also many opportunities for students to host a variety of different types of music shows.

The **Speech-Language Pathology Video Observation Lab** is housed in the IUP Speech, Language, and Hearing Clinic. Funded by a Pennsylvania Department of Education Link-to-Learn Higher Education Technology grant in 2002, this is the only lab that utilizes a unique system for the digital video capture of students' speech and language diagnostic or treatment sessions. This system facilitates students' self-analysis of their sessions and supervisor feedback to students. The resulting digital files can also be used in classroom instruction or as components of student portfolios.

The **Television Station** broadcasts over a cable system that has a potential audience of 100,000 people. WIUP-TV has approximately 100 students involved in management and production. The facility is student run with a faculty advisor and features state-of-the-art hardware and software.

## Center for Career and Technical Personnel Preparation

### Vocational-Technical Professional Studies

**Website:** [www.iup.edu/careerteched](http://www.iup.edu/careerteched)

**Donald C. Gamble, Director;** Karen S. Rivosecchi, Chairperson; Boyd, Catlos, Dolecki, Livingston, Whinnie

The Vocational-Technical Professional Studies program offers undergraduate curricula that prepare in-service teachers for vocational-technical education. Programs may lead to either a Bachelor of Science in Education degree with certification or to professional certification only. Program graduates have a broad range of employment opportunities as teachers/trainers in secondary schools, vocational-technical schools, postsecondary schools, and business and industry.

Certification to teach vocational-technical education in the commonwealth's secondary schools is issued to individuals who meet statutory requirements, demonstrate occupational/technical proficiency on a nationally standardized occupational competency examination, and complete 78 credits of the Pennsylvania Department of Education's approved university program.

Certification to serve as a cooperative education teacher-coordinator in the commonwealth's secondary schools can be earned by completing a program of studies tailored to each student's individual background and professional needs. The program prepares individuals for managing industrial cooperative training and school-to-work transitional experiences. For persons holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based upon educational credits earned.

Each program requires completion of the following credits: Bachelor of Science in Education (120cr), Cooperative Education Teacher/Coordinator Certificate (15cr), and Vocational Technical Education Certificate (78cr).

### Bachelor of Science in Education–Vocational-Technical Education

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48-50

**Mathematics:** MATH 151, 152

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, no courses with VOED prefix

**College:** 14

#### Professional Educational Sequence:

COMM 103	Digital Instructional Technology	3cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 458	Transition for Youth with Disabilities	3cr

EDSP 102	Educational Psychology	3cr
EDUC 442	School Law	1cr

**Major:** 28

#### Required Courses:

VOED 101	Introduction to Career and Technical Education	1cr
VOED 102	Instructional Planning in the Career and Technical Classroom	2cr
VOED 103	Strategies for Teaching Career and Technical Education	3cr
VOED 201	Making Accommodations for Students with Special Needs in the Career and Technical Classroom	1cr
VOED 202	Industry Linkages for Career and Technical Programs	3cr
VOED 203	Incorporating Reading and Communications Strategies in the Career and Technical Classroom	3cr
VOED 301	Integrating Math and Science in Career and Technical Education	3cr
VOED 302	Career Education in the Career and Technical Classroom	3cr
VOED 403	Assessment and Evaluation in Career and Technical Education	3cr
VOED 404	Research in Career and Technical Education	3cr
VOED 405	Professional Seminar in Career and Technical Education	3cr

**Controlled Electives:** (as advised) 3  
CNSV 101, MGMT 275, or VOED 402

**Other Requirements:** 24

VOED 450	Technical Preparation of the Vocational Professional	24cr
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**Free Electives:** 1-3

**Total Degree Requirements:** 120

### Certificate–Vocational-Technical Education

**Liberal Studies:** As follows: 31-33

**English:** ENGL 101, 202

**Fine Arts:** one course from list

**Humanities:** one course from list

**Mathematics:** MATH 151, 152

**Natural Science:** two courses, lab or non-lab

**Social Science:** PSYC 101

**Liberal Studies Electives:** one course, no course with VOED prefix

**College:** 14

#### Professional Educational Sequence:

COMM 103	Digital Instructional Technology	3cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 458	Transition for Youth with Disabilities	3cr
EDSP 102	Educational Psychology	3cr
EDUC 442	School Law	1cr

**Major:** 28

#### Required Courses:

VOED 101	Introduction to Career and Technical Education	1cr
VOED 102	Instructional Planning in the Career and Technical Classroom	2cr
VOED 103	Strategies for Teaching Career and Technical Education	3cr
VOED 201	Making Accommodations for Students with Special Needs in the Career and Technical Classroom	1cr

VOED 202	Industry Linkages for Career and Technical Programs	3cr
VOED 203	Incorporating Reading and Communications Strategies in the Career and Technical Classroom	3cr
VOED 301	Integrating Math and Science in Career and Technical Education	3cr
VOED 302	Career Education in the Career and Technical Classroom	3cr
VOED 403	Assessment and Evaluation in Career and Technical Education	3cr
VOED 404	Research in Career and Technical Education	3cr
VOED 405	Professional Seminar in Career and Technical Education	3cr

**Controlled Electives:** (as advised) 3  
 CNSV 101, MGMT 275, or VOED 402

**Free Electives:** 0-2

**Total Certification Requirements:** 78

### Certificate as Secondary School Cooperative Education Teacher/Coordinator

Existing Pennsylvania teaching certificate (Vocational Instructional I or II certificate or Instructional I or II certificate)

**Required Courses:**

VOED 402	Special Topics in Vocational Pedagogical Preparation	6-15cr
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**Total Certification Requirements:** 15 (1)

(1) Student may be exempt from some credit requirements based on proof of previous coursework and demonstration of specific competencies.

## Department of Adult and Community Education

**Website:** [www.iup.edu/ace](http://www.iup.edu/ace)

**Gary J. Dean, Chairperson;** Ritchey; and professor emeritus Ferro

The department is a graduate department offering two tracks leading to the Master of Arts degree: Adult and Community Education and Adult Education and Communications Technology.

The M.A. degree in Adult and Community Education helps students develop skills related to teaching and planning educational programs for adults in a wide variety of settings, including business and industry, the community, social service organizations, health agencies and hospitals, colleges and universities, the government, and religious institutions. The M.A. degree in Adult Education and Communications Technology, administered jointly with the Department of Communications Media, prepares students to become adult educators with an emphasis on the use of technology, including computers, production design, radio and television, and distance education technology. Completion of appropriate requirements allows a student in the AECT track to apply for PDE certification as an Instructional Technology Specialist. Refer to the *Graduate School Catalog* for further details.

## Department of Communications Media

**Website:** [www.iup.edu/commmedia](http://www.iup.edu/commmedia)

**Mark J. Piwinsky, Chairperson;** Almeida, Ausel, Kanyarusoke, Lauber, Leidman-Golub, Lenze, Partridge, Start, Stiegler, Wilson; and professors emeriti Maclsaac, Murray, Young

The department offers a Bachelor of Science degree with a major in Communications Media and two minors, one in Communications Media and one in Educational Technology. The minor in Communications Media is an 18-credit program designed to complement any major. The minor in Educational Technology is a 24-credit program designed for students who are completing a teaching degree. The department also serves preservice teachers and other students who are required to complete COMM 103.

The philosophy of the Communications Media Department is to prepare generalists in the area of communications. Students may select from a number of elective courses, depending on their career interests.

The department faculty offers a wide variety of experience in all areas of communications media. With the combination of classroom work and the required internship program, departmental graduates are competitive for positions in various areas. Students graduating with a degree in Communications Media have obtained positions in such areas as radio, television, cable television, public relations, advertising media, media relations, and corporate media relations.

Students changing majors from other academic departments within the university are required to be in good academic standing before the transfer will be approved.

## Bachelor of Science—Communications Media

**Liberal Studies:** As outlined in Liberal Studies section 51 with the following specifications:

**Mathematics:** 3cr

**Social Science:** PSYC 101

**Liberal Studies Electives:** 6cr, BTED/COSC/IFMG 101 (to be taken in the freshman year), no courses with COMM prefix

**Major:** 42

**Required Courses:**

COMM 101	Communications Media in American Society	3cr
COMM 150	Aesthetics and Theory of Communications Media	3cr
COMM 395	Career Planning in Communications Media	1cr
COMM 475	Senior Portfolio Presentation	1cr
COMM 493	Internship (summer only)	6, 9, or 12cr

**Minimum of one course from the following:**

COMM 302	Research in Communications Media	3cr
COMM 303	Scriptwriting	3cr
COMM 330	Instructional Design for Training and Development	3cr
COMM 403	Broadcast Newswriting	3cr

**Minimum of two production courses from the following:**

COMM 240	Communications Graphics	3cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 251	Television Production	3cr
COMM 271	Beginning Photography	3cr
COMM 306	2D Digital Game Development	3cr
COMM 340	Advanced Communication Graphics	3cr
COMM 348	Animation	3cr
COMM 349	Radio Production	3cr
COMM 351	Advanced Video Production	3cr
COMM 371	Photography II: The Print	3cr
COMM 374	Documentary Photography	3cr
COMM 406	3D Game and Simulation Design and Development	3cr
COMM 408	Media Field Studies	3cr
COMM 440	Multimedia Production	3cr
COMM 446	3D Modeling and Animation for Games and Simulations	3cr
COMM 449	Advanced Audio Recording Techniques	3cr
COMM 451	Broadcast News Process	3cr
COMM 471	Electronic Imaging	3cr

**Controlled Electives:** 13-19cr

Other COMM elective courses including courses from the above lists not taken as part of those requirements

**Other Requirements:** 21

Courses outside Communications Media that augment the student's major course of study (advisor approval)

**Free Electives:** 6

**(#) Total Degree Requirements:** 120

(#) A maximum of 12cr of COMM 493 can be applied to requirements for graduation.

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### Minor—Communications Media 18

#### Required Courses:

COMM 101	Communications Media in American Society	3cr
COMM XXX	Electives in Communication Media	15cr

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### Minor—Educational Technology 24

#### Required Courses:

BTED/COSC/IFMG 101	Computer Literacy	3cr
COMM 101	Communications Media in American Society	3cr
COMM 460	Emerging Trends in Communication Technology	3cr
COMM XXX	Electives in Communications Media	15cr

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### Communications Media Certificate in Photography and Digital Imaging

For students who wish to obtain inclusive training in digital photography, image optimization, and display. This 18-credit program certificate requires students to take five 3-credit core courses and an additional 3 credits of electives. Completion of the certificate will help prepare students for positions in many fields where knowledge of photography and digital imaging is required. Majors from other departments will be able to declare a Communications Media minor along with receiving the certificate.

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### Communications Media Certificate in Photography and Digital Imaging 18

#### Core Courses:

COMM 101	Communications Media in American Society	3cr	15
COMM 271	Beginning Photography	3cr	
COMM 371	Photography II: The Print	3cr	
COMM 374	Documentary Photography	3cr	
COMM 471	Electronic Imaging	3cr	

#### Electives:

COMM 151	Basic Lighting for Still and Motion Imagery	1cr	3
COMM 201	Internet and Multimedia	3cr	
COMM 240	Communications Graphics	3cr	
COMM 251	Television Production	3cr	
COMM 335	Communications Consulting and Project Management	3cr	
COMM 390	Practicum in Communications	1-3cr	
COMM 408	Media Field Studies	3cr	
COMM 440	Multimedia Production	3cr	
COMM 481	Special Topics	1-3cr	

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## Department of Counseling

**Website:** [www.iup.edu/counseling](http://www.iup.edu/counseling)

**Claire J. Dandeneau, Chairperson;** Branthoover, Bruno, Carone, Desmond, Guth, L'Amoreaux, Marshak, McCarthy, Moore, Witchel; and professor emeritus Worzbyt

This graduate department offers two master's degree programs. The M.A. degree in Community Counseling is designed to prepare students to work in a variety of settings including mental health centers, drug and alcohol treatment programs, specialized community agencies, vocational education or rehabilitation programs, correctional institutions, health care settings, social services, and business and industry. This program is also offered at the IUP Monroeville Graduate and Professional Center.

The M.Ed. degree in School Counseling Certification is designed to prepare Elementary and Secondary Counselors to qualify for institutional and commonwealth certification. The 48-credit competency-based program includes a series of counseling skills courses to individual and group counseling and a

field experience under the supervision of a certified school counselor. Those students already possessing a master's degree may apply to the counseling program for "Certification Only" status. Refer to the *Graduate School Catalog* for further details.

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## Department of Developmental Studies

**Website:** [www.iup.edu/devstudies](http://www.iup.edu/devstudies)

**Melvin A. Jenkins, Chairperson;** Ali, Hamer, Johnson, Lipsky, Stephenson, Wang

The Department of Developmental Studies is committed to helping under-prepared students prepare, prepared students advance, and advanced students excel. With this motto as its mission, the department provides various academic support services to all IUP students.

The department offers a package of freshman seminar courses designed to prepare first-year students with the skills and knowledge important to college success. These three 1-credit courses count toward graduation and include DVST 150, 160, and 170.

The department offers a pre-college experience to all incoming first-year students called CUSP: The Early Entrance Experience. This program starts one week prior to fall classes and includes the course DVST 150 plus activities, workshops, and seminars to orient students to the higher education experience, to IUP in particular, and to the factors in student success.

In addition, the department offers courses which develop learning skills to enhance academic success. Courses in three levels of developmental mathematics (DVST 091, 092, 093) and two courses in reading (DVST 070, 075) are offered for institutional credit. Institutional credit counts in determining full-time enrollment status but not in determining credits applicable for degree eligibility at graduation. DVST 110, a 2-credit course that can be used for undergraduate graduation credit, is often linked with another content course.

All students matriculating through the Department of Developmental Studies as department advisees receive a program of freshman-year courses, developmental advisement, and academic support services and are transferred to advisement in their college at the end of a successful freshman year.

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### The Center for Learning Enhancement

The department provides educational support services in the areas of reading, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. These services are provided by both professional and undergraduate paraprofessional staff. Students are encouraged to participate in a broad array of program services including one-to-one and group tutorials, workshops, and Supplemental Instruction sessions provided by a trained staff of undergraduate peer educators. These services focus on historically difficult academic courses and majors.

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### Act 101 Program

Students identified as eligible for Act 101 support receive the Department of Developmental Studies complete freshman program. The program, created as a result of the Pennsylvania Higher Education Equal Opportunity Act 101 in 1971 by the legislature of the commonwealth, focuses on servicing IUP students in order to make the ideal of equal educational opportunity a reality for all qualified students.

The department offers two Act 101 Programs—one on the main campus and another at the Punxsutawney Regional Campus. The office is located in 202 Pratt Hall. Further information about the Department of Developmental Studies and the Act 101 Program can be obtained by calling 724-357-2729 or at the website [www.iup.edu/devstudies](http://www.iup.edu/devstudies).

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### Associate of Arts—General Studies

The Associate of Arts degree with a major in General Studies is designed for the nontraditional or adult learner who seeks to acquire a broad base of knowledge in the liberal arts. This program consists of the core of Liberal Studies requirements of the bachelor's degree programs plus 10 credits of electives. Course requirements are sometimes adjusted for individuals. No more than 30 credits may be transferred into this degree program from other colleges.

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**Associate of Arts–General Studies**

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: 50

<b>Fine Arts</b>	3cr
<b>Health and Wellness/ROTC</b>	3cr
<b>Humanities</b>	9cr
<b>Learning Skills</b>	10cr
<b>Natural Science</b>	7cr
<b>Social Science</b>	9cr
<b>Controlled Liberal Studies Electives</b>	9cr
<b>Free Electives:</b>	10
<b>Total Degree Requirements:</b>	60

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**Bachelor of Science–General Studies**

The Bachelor of Science degree with a major in General Studies is designed for the mature adult student, who under faculty advisement can explore and develop an individualized plan of study which does not approach any existing IUP major. This individually designed plan of study must be based on a specific theme which incorporates basic and applied coursework within a theoretical framework culminating in a senior-year independent research project. At the time of application for degree candidacy or transfer from another major, the student must submit a plan of study which contains the proposed theme, rationale, and courses needed to satisfy the Special Interest Area. A faculty member will be assigned to assist with the plan of study prior to acceptance to degree candidacy. (Students other than Office of Distance Learning and Continuing Education students must have completed 45cr before a request for transfer will be considered.)

The student's plan of study, which is designed to fulfill the Special Interest Area, must be approved by the the associate dean for Academic Affairs.

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**Bachelor of Science–General Studies**

**Liberal Studies:** As outlined in Liberal Studies section 53

**General Area of Study:** (1, 2) 24

Choose at least 6cr from three of the four areas listed below. At least 12cr must be 300-level or above. Courses should relate to theme developed in Special Interest Area.

*Arts, Letters, and Culture Area:* Art, Communications Media, English, French, German, Journalism, Music, Philosophy, Religious Studies, Spanish, Theater

*Human Behavior and Development Area:* Anthropology, Education, Health, Family and Consumer Sciences, Psychology, Sociology

*Science, Mathematics, and Technology Area:* Biology, Chemistry, Computer Science, Geoscience, Mathematics, Physics, and relevant courses in education

*Social and Political Systems Area:* Economics, Education, Employment and Labor Relations, Geography and Regional Planning, History, Political Science

**Special Interest Area:** (3) 21

With approval of advisor, student may select, from any department listed above, courses which focus on a particular need or interest. At least 12cr must be 300-level or above. The program must include either one research course which provides opportunities for extensive writing or an independent study project. Some courses will not be available to General Studies majors.

**Electives:** 22  
At least 6cr must be 300-level or above

**Total Degree Requirements:** 120

- (1) Individually planned themes may not duplicate any existing degree programs which are otherwise available at IUP, nor may they be used to circumvent specific requirements within an existing major.
- (2) No more than 30cr taken in any one department will count toward graduation.

- (3) In the application of university policies, the Special Interest Area is considered as the major. Specifically, in order to graduate, students must be in academic good standing and attain a 2.0 GPA in the Special Interest Area.

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**Department of Educational and School Psychology**

**Website:** [www.iup.edu/schoolpsychology](http://www.iup.edu/schoolpsychology)

**Lynanne Black, Chairperson;** Barker, Briscoe, Kovaleski, McGowan, McLaughlin, Runge, Staszkiwicz; and professors emeriti Damiani, Hoellein, Levinson, Quirk, Yanuzzi

The department provides courses to undergraduate and graduate students.

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**Minor in Educational Psychology**

Undergraduate students may minor in Educational Psychology by making application to the advisor of the minor program. Fifteen credits are required for the minor: EDSP 102, 373, 376, 378, and 477.

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**Graduate Programs**

Programs leading to the M.Ed. degree in Educational Psychology as well as a post-master's certification and a D.Ed. in School Psychology are described in the *Graduate School Catalog*.

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**College of Education and Educational Technology**

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**Honors Track**

This track enables students to participate in advanced study in the areas of learning and instructional theory, motivation to learn, assessment of student learning, classroom management, and the psychology of adolescent education. The track utilizes coursework currently in the Educational Psychology Minor, which also carry honors courses designation. In addition, students complete an honors internship, EDSP 493. Students may complete the minor in Educational Psychology while in the honors track if desired.

The honors track is encouraged for exceptional students in the field of education. Honors coursework is recorded on university transcripts, and students completing the Education Honors Track will be recognized at departmental commencement ceremonies.

**Eligibility and Requirements:** The Honors Track is open by permission to elementary and secondary education majors with a minimum 3.25 GPA in total university coursework and a completed application. To apply, an application should be filed with the chair of the Educational and School Psychology Department. Students complete EDSP 102/H/ and 477/H/; two of the following electives: EDSP 373/H/, 376/H/, or 378/H/; and EDSP 493/H/ for a total of 13 credits. Students must earn at least a "B" in each course completed for the track to proceed and maintain a 3.25 cumulative GPA. To determine how Honors Track courses will be integrated into existing requirements for their major, students should consult their advisors.

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**Department of Professional Studies in Education**

**Website:** [www.iup.edu/pse](http://www.iup.edu/pse)

**Sue A. Rieg, Chairperson;** Bieger, Corbett, Creany, Doverspike, Evering, Fello, Fennimore, Frantz, Hannibal, Helterbran, Jalongo, Johnson, Kaufman, Kerry-Moran, Laverick, Machado, Marcoline, Millward, Nicholson, Paquette, Rotigel, Tidwell, Mark Twiest, Meghan Twiest; and professors emeriti Dorsey, Elliott, Gerlach, King, Kupetz, Lott, McFeely, Mott, Rizzo, E. Vold, L. Vold, Walthour

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**Early Childhood Education/Special Education**

This program is designed to assist students in becoming highly qualified, competent, and effective teachers of all learners in Grades PreK through Grade 4. The program has an emphasis on best practices in both early childhood education and special education. Students in this program will meet the academic requirements for Pennsylvania certification in PreK to Grade 4 as well as Special Education PreK to Grade 8.

This program, combining coursework in both early childhood education and special education with extensive field experiences, prepares students to be professional educators who are well-qualified to utilize appropriate techniques and strategies to expand all children's cognitive, social, emotional, and physical development. Field experiences will take place in a variety of settings encompassing diverse learning needs as well as learners in birth to Grade 3 classrooms, preschool classrooms, K-1 classrooms, and classrooms in Grades 2-4.

Admission to this program requires entering students to meet the guidelines for admission to the College of Education and Educational Technology. Additionally, students must achieve a 3.0 GPA to apply for Step 1 of the Teacher Education process, to enroll in major courses, to student teach, and to be recommended for certification. Students must meet the requirements leading to teacher certification as outlined in this catalog.

### Middle-Level Education Grades 4-8 Program

The program is designed to prepare preservice teachers to meet the demands of teaching all academic subjects in the middle grades of 4-8. Content and methods courses focus on the developmental and learning characteristics of these students.

### Middle-Level Education for Grades 4-8 with English/Language Arts Specialization

The program is designed to prepare preservice teachers to meet the demands of teaching all academic subjects at the Middle Level in grades 4-8 with a specialization in English/Language Arts Education.

### Graduate Programs

Programs leading to the M.Ed. and D.Ed. degrees are described in the *Graduate School Catalog*. Internships and assistantships are available.

### Bachelor of Science in Education—Early Childhood Education/Special Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Humanities:** HIST 195 (1)

**Mathematics:** MATH 151

**Natural Science:** SCI 101, 102, 103, 104

**Social Science:** GEOG 101, 102, or 104, PSYC 101

**Liberal Studies Electives:** 3cr, MATH 152

#### College:

#### Preprofessional Education Sequence:

COMM 103 Digital Instructional Technology *or* 3cr  
 EDEX 103 Special Education Technology 3cr  
 EDSP 102 Educational Psychology 3cr

#### Professional Education Sequence:

EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr  
 EDUC 242 Pre-Student Teaching Clinical Experience I 1cr  
 EDUC 342 Pre-Student Teaching Clinical Experience II 1cr  
 EDUC 442 School Law 1cr  
 EDUC 461 Student Teaching 5cr  
 EDUC 471 Student Teaching 5cr

#### Major:

#### Required Courses: (2)

ECED 117 Family, Community, and School Relationships in a Diverse Society 2cr  
 ECED 200 Introduction to Early Childhood Education 3cr  
 ECED 221 Literature for the Young Child and Adolescent 3cr  
 ECED 250 Language Development 3cr  
 ECED 280 Maximizing Learning: Engaging All PreK to Grade 4 Learners 3cr  
 ECED 310 Science, Health, and Safety for All PreK to Grade 4 Learners 3cr  
 ECED 351 Literacy for the Emergent Reader PreK-Grade 1 Learners 3cr  
 ECED 411 Social Studies for All PreK to Grade 4 Learners 3cr

ECED 451 Literacy for the Developing Reader Grades 2-4 Learners 3cr  
 ECSP 112 Growth and Development: Typical and Atypical 3cr  
 ECSP 314 Creative Experiences and Play for All PreK to Grade 4 Learners 3cr  
 ECSP 340 Introduction to Classroom and Behavior Management 3cr  
 ECSP 440 Professional Seminar: Teacher as Researcher and Advocate for All PreK to Grade 4 Learners 2cr  
 EDEX 111 Introduction to Exceptional Persons 3cr  
 EDEX 323 Instruction of English Language Learners with Special Needs 2cr  
 EDEX 425 Methods and Curriculum (Mild-Moderate Disabilities) 3cr  
 EDEX 435 Methods and Curriculum (Severe-Profound Disabilities) 3cr  
 EDEX 460 Family Perspectives on Disability 3cr  
 EDEX 469 Education of Persons with Emotional/Behavioral Disorders, Learning Disabilities, or Brain Injury 3cr  
 EDEX 478 Education of Persons with Mental Retardation/Developmental Disabilities and Physical/Multiple Disabilities 3cr  
 ELED 313 Teaching Mathematics in the Elementary School 3cr  
 MATH 320 Mathematics for Early Childhood 3cr

**Total Degree Requirements:** 135

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

- (1) HIST 195 will be replaced by HIST 196, which will satisfy the PDE requirement once HIST 196 is approved.
- (2) A 3.0 cumulative GPA is required to register for major courses.

### Bachelor of Science in Education—Middle-Level Program with English/Language Arts Specialization (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52

**Humanities:** HIST 195, ENGL 122, PHIL/RLST

**Mathematics:** MATH 151, 152 (required)

**Natural Science:** BIOL 103, SCI 105, GEOS 101/102 (required)

**Social Science:** GEOG 101, 102 or 104, ECON 101 or 121, PLSC 101 or 111

**Liberal Studies Electives:** 0cr

#### College:

#### Preprofessional Education Sequence:

COMM 103 Digital Instructional Technology 3cr  
 EDSP 102 Educational Psychology 3cr

#### Professional Education Sequence:

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr  
 EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr  
 EDUC 242 Pre-Student Teaching I 1cr  
 EDUC 342 Pre-Student Teaching II 1cr  
 EDUC 421 Student Teaching-Non-English/Language Arts Setting 5cr  
 EDUC 441 Student Teaching- English/Language Arts Setting 5cr  
 EDUC 442 School Law 1cr  
 EDUC 499 Multicultural/Multiethnic Education 2cr



<b>Major:</b>		27
<b>Required Middle-Level Courses:</b>		
MATH 317	Probability and Statistics for Elementary/ Middle-Level Teachers	3cr
MATH 413	Methods of Teaching Mathematics at the Middle Level	3cr
MIDL 221	Literature for Middle Level	3cr
MIDL 222	Reading Instruction and Assessment in Grades 4-8	3cr
MIDL 310	Instructional Theory and Planning for the Middle Level	3cr
MIDL 311	Social Studies Instruction and Assessment Grades 4-8	3cr
MIDL 312	Science Instruction and Assessment in Grades 4-8	3cr
MIDL 315	Classroom Management and Adolescent Development	3cr
MIDL 425	Methods of Teaching Language Arts in Grades 4-8	3cr
<b>English/Language Arts Distribution Requirements:</b>		18
EDUC 408	Reading in the Content Areas	3cr
ENGL 314	Speech and Communication in the Secondary Classroom	3cr
ENGL 324	Teaching and Evaluating Writing	3cr
ENGL 330	The Structure of English	3cr
MIDL 321	Twenty-first Century Literacies for Diverse Students	3cr
MIDL 422	Diagnostic and Remedial Reading	3cr
<b>Total Degree Requirements:</b>		123
(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.		

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### Bachelor of Science in Education—Middle-Level Education 4-8/ Mathematics Specialization (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52  
**Mathematics:** MATH 151, 152  
**Natural Science:** BIOL 103, SCI 105, GEOS 101-102  
**Social Science:** ECON 101 or 121, GEOG 102 or 104, PLSC 101 or 111  
**Liberal Studies Electives:** 0cr

<b>College:</b>		26
<b>Preprofessional Education Sequence:</b>		
COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr
<b>Professional Education Sequence:</b>		
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 421	Student Teaching	5cr
EDUC 441	Student Teaching	5cr
EDUC 442	School Law	1cr
EDUC 499	Multicultural/Multiethnic Education	2cr

<b>Major:</b>		21
<b>Required Middle-Level Courses:</b>		
MIDL 221	Literature for Middle Level	3cr
MIDL 222	Reading Instruction and Assessment in Grades 4-8	3cr
MIDL 310	Instructional Theory and Planning for the Middle Level	3cr

MIDL 311	Social Studies Instruction and Assessment in Grades 4-8	3cr	
MIDL 312	Science Instruction and Assessment in Grades 4-8	3cr	
MIDL 315	Classroom Management and Adolescent Development	3cr	
MIDL 425	Methods of Teaching Language Arts in Grades 4-8	3cr	
<b>Mathematics Distribution Requirements:</b>			24
MATH 153	Elements of Algebra	3cr	
MATH 317	Probability and Statistics for Elementary/ Middle-Level Teachers	3cr	
MATH 413	Methods of Teaching Mathematics at the Middle Level	3cr	
MATH 420	Patterns and Functions for Elementary/ Middle-Level Teachers	3cr	
MATH 456	Geometry for Elementary/Middle-Level Teachers	3cr	
MATH 458	Logic and Logical Games for Elementary/ Middle-Level Teachers	3cr	
MATH 471	Algebra for Elementary/Middle-Level Teachers	3cr	
One course from the following: MATH 457, 459, or 461		3cr	

**Total Degree Requirements:** 123  
 (\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

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### Spanish for Elementary Education

Elementary Education majors may earn a minor in Spanish for Elementary Teaching, which will prepare them to teach in elementary programs in which content teaching in the Spanish language is the objective. To complete this minor, students must: 1) attain a minimum level of Intermediate-High in Spanish on the ACTFL/ETS oral proficiency scale the semester prior to Student Teaching;\* 2) successfully complete a six-week summer study abroad experience with IUP's Mexico Summer Study Abroad Program\*\* (usually the summer following the junior year); 3) successfully complete the student teaching experience in a bilingual or partial-immersion elementary school classroom; and 4) complete the minimum number of credits required by the Foreign Languages Department for a minor. See the Department of Foreign Languages section in this catalog for information.

\*The placement proficiency level may vary, depending on student teacher placement; see advisor.

\*\*Other program options may be available for Elementary Education students, pending consultation with advisor.

### Department of Special Education and Clinical Services

**Website:** [www.iup.edu/special-ed](http://www.iup.edu/special-ed)

**Becky A. Knickelbein, Chairperson;** Baker, Brady, Cramer, Domaracki, Ferrell, Glor-Sheib, Lombard, Migyanka, Price, Richburg, Robertson, Sink, D. Stein, K. Stein, Yost; and professors emeriti M. Bahn, W. Bahn, Fiddler, Klein, Morris, C. Reber, Shane, Turton

This department offers the Bachelor of Science in Education degree with majors in **Deaf Education** and **Speech-Language Pathology and Audiology**. A Bachelor of Science degree with a major in **Disability Services** is also offered. A Bachelor of Science in Education degree with a major in **Early Childhood Education/Special Education** is offered in conjunction with the Department of Professional Studies and Education. Each major follows a prescribed sequence of courses.

The following grade policy applies to two programs of study in the department: Deaf Education and Speech-Language Pathology and Audiology. Individual students may appeal any aspect of the policy by making a formal written request to the Departmental Appeals Committee.

1. No more than one "D" in major courses will be accepted toward graduation and certification.

2. No “D” is permitted as the final recorded grade in any of the following courses: EDEX 425, 435, 493, EDHL 308, EDUC 421, 441, and SPLP 122.

The following enrollment policy applies to two undergraduate programs in the department: Deaf Education and Speech-Language Pathology and Audiology. To enroll in a 300- or 400-level course in those programs, a student must have a minimum 3.0 cumulative GPA, must meet the other provisions of the 3-Step Process for Teacher Education, and must either be a departmental major or have permission of the department chair.

### A. Early Childhood Education/Special Education

This program is designed to assist students in becoming highly qualified, competent, and effective teachers of all learners in Grades PreK through Grade 4. The program has an emphasis on best practices in both early childhood education and special education. Students in this program will meet the academic requirements for Pennsylvania certification in PreK to Grade 4 as well as Special Education PreK to Grade 8.

This program, combining coursework in both early childhood education and special education with extensive field experiences, prepares students to be professional educators who are well-qualified to utilize appropriate techniques and strategies to expand all children’s cognitive, social, emotional, and physical development. Field experiences will take place in a variety of settings encompassing diverse learning needs as well as learners in birth to Grade 3 classrooms, preschool classrooms, K-1 classrooms, and classrooms in Grades 2-4.

Admission to this program requires entering students to meet the guidelines for admission to the College of Education and Educational Technology. Additionally, students must achieve a 3.0 GPA to apply for Step 1 of the Teacher Education process, to enroll in major courses, to student teach, and to be recommended for certification. Students must meet the requirements leading to teacher certification as outlined in this catalog.

### Bachelor of Science in Education—Early Childhood Education/ Special Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Humanities:** HIST 195 (1)

**Mathematics:** MATH 151

**Natural Science:** SCI 101, 102, 103, 104

**Social Science:** GEOG 101, 102, or 104, PSYC 101

**Liberal Studies Electives:** 3cr, MATH 152

#### College:

#### Preprofessional Education Sequence:

COMM 103 Digital Instructional Technology *or*  
EDEX 103 Special Education Technology 3cr  
EDSP 102 Educational Psychology 3cr

#### Professional Education Sequence:

EDSP 477 Assessment of Student Learning: Design  
and Interpretation of Educational Measures 3cr  
EDUC 242 Pre-Student Teaching Clinical Experience I 1cr  
EDUC 342 Pre-Student Teaching Clinical Experience II 1cr  
EDUC 442 School Law 1cr  
EDUC 461 Student Teaching 5cr  
EDUC 471 Student Teaching 5cr

#### Major:

#### Required Courses: (2)

ECED 117 Family, Community, and School  
Relationships in a Diverse Society 2cr  
ECED 200 Introduction to Early Childhood Education 3cr  
ECED 221 Literature for the Young Child and Adolescent 3cr  
ECED 250 Language Development 3cr  
ECED 280 Maximizing Learning: Engaging All PreK to  
Grade 4 Learners 3cr  
ECED 310 Science, Health, and Safety for All PreK to  
Grade 4 Learners 3cr

ECED 351	Literacy for the Emergent Reader PreK- Grade 1 Learners	3cr
ECED 411	Social Studies for All PreK to Grade 4 Learners	3cr
ECED 451	Literacy for the Developing Reader Grades 2-4 Learners	3cr
ECSP 112	Growth and Development: Typical and Atypical	3cr
ECSP 314	Creative Experiences and Play for All PreK to Grade 4 Learners	3cr
ECSP 340	Introduction to Classroom and Behavior Management	3cr
ECSP 440	Professional Seminar: Teacher as Researcher and Advocate for All PreK to Grade 4 Learners	2cr
EDEX 111	Introduction to Exceptional Persons	3cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 425	Methods and Curriculum (Mild-Moderate Disabilities)	3cr
EDEX 435	Methods and Curriculum (Severe-Profound Disabilities)	3cr
EDEX 460	Family Perspectives on Disability	3cr
EDEX 469	Education of Persons with Emotional/ Behavioral Disorders, Learning Disabilities, or Brain Injury	3cr
EDEX 478	Education of Persons with Mental Retardation/ Developmental Disabilities and Physical/ Multiple Disabilities	3cr
ELED 313	Teaching Mathematics in the Elementary School	3cr
MATH 320	Mathematics for Early Childhood	3cr

**Total Degree Requirements:** 135

(\*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.

(1) HIST 195 will be replaced by HIST 196, which will satisfy the PDE requirement once HIST 196 is approved.

(2) A 3.0 cumulative GPA is required to register for major courses.

### B. Minor—Special Education

Completion of the minor in Special Education will prepare students to have a better understanding of the social, emotional, and learning characteristics of individuals with mental retardation, autism, developmental disabilities, learning disabilities, brain injuries, emotional and behavioral disorders, physical disabilities, and multiple disabilities. In addition, students taking this minor will develop a thorough understanding of PL 105-17, Individuals with Disabilities Education Act (IDEA), which addresses the rights of individuals and parents regarding inclusion in the regular classroom, delivery of services in inclusive settings, and transition planning.

The minor in Special Education is an 18-credit program with 3 required and 15 elective credits. The required credits are met through enrollment in EDEX 111. This course provides essential information regarding IDEA (PL 105-17) as well as an overview of the field of Special Education, thus allowing the minor candidate to select a more focused area of concentration.

This minor would be of interest to Sociology, Psychology, Child Development and Family Relations, Criminology, and Secondary Education majors who are interested in interacting or working with individuals with disabilities. To be accepted into the minor a student must have a minimum 2.5 cumulative GPA.

### Minor—Special Education 18

<b>Required Course:</b>		3
EDEX 111	Introduction to Exceptional Persons	3cr
<b>Controlled Electives:</b> Five courses from the following:		15
EDEX 340	Introduction to Behavior Management in Special Education	3cr
EDEX 415	Preschool Education for Children with Disabilities	3cr

EDEX 458	Transition for Youth with Disabilities	3cr
EDEX 469	Education of Persons with Emotional/ Behavioral Disorders, Learning Disabilities, or Brain Injury	3cr
EDEX 460	Family Perspectives on Disability	3cr
EDEX 478	Education of Persons with Mental Retardation/ Developmental Disabilities and Physical/ Multiple Disabilities	3cr

### C. Speech-Language Pathology and Audiology

Completion of the sequence of courses in Speech-Language Pathology and Audiology serves as a preprofessional program for students planning to become practicing speech-language pathologists or audiologists. Students entering the undergraduate program should be aware of the following:

1. IUP is accredited by the Council on Academic Accreditation of the American Speech-Language-Hearing Association and qualifies a person for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and Pennsylvania State Licensure.
2. National certification, state licensure, and Pennsylvania Department of Education Certification in Speech-Language Impaired are available only to holders of the master's degree in Speech-Language Pathology.
3. Students will need to project a minimum cumulative GPA greater than 3.0 to qualify for admission to most graduate schools.
4. Upon completion of a master's degree at IUP, students will be prepared to provide services in work settings such as hospitals, community clinics, public health programs, and rehabilitation settings.
5. Students who elect to prepare for certification in Speech-Language Impaired from the Pennsylvania Department of Education must successfully complete the College of Education and Educational Technology requirements listed below prior to enrollment in the Master of Science degree in the Speech-Language Pathology program at IUP.

The University Speech and Hearing Clinic serves as the laboratory for the undergraduate clinical practicum. Prior to registration for the clinical practicum course (SPLP 420), students must earn a minimum cumulative 3.0 GPA and complete the following hours of observation through enrollment in EDUC 242 and 342:

- A. 25 hours of observation in speech-language pathology supervised by an IUP faculty member who holds a Certificate of Clinical Competence in Speech-Language Pathology
- B. 20 hours of classroom observation:
  1. Five hours in regular education classrooms, K-3
  2. Five hours in special education classrooms
  3. Five hours in regular education classrooms with integrated special students
  4. Five hours in community facilities such as preschools, sheltered workshops, etc. Services in this category should be of a noneducational, nonspeech pathology type.

### Bachelor of Science in Education–Speech-Language Pathology and Audiology (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** 6cr, MATH 217 and any course from the approved list

**Natural Science:** laboratory science sequence required (BIOL 103-104 recommended)

**Social Science:** PSYC 101

**Liberal Studies Electives:** 6cr, PSYC 310, no courses with SPLP prefix

**Pre-Teacher Certification Track only:** 10

**Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology 3cr

EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

EDUC 442 School Law 1cr

SPLP 412 Organization and Administration of Speech and Hearing Program 3cr

**Major:** 38

### Required Courses:

EDEX 111	Introduction to Exceptional Persons	3cr
EDEX 222	Methods of Teaching Reading to Persons with Disabilities	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
SPLP 111	Introduction to Communication Disorders	3cr
SPLP 122	Clinical Phonology	3cr
SPLP 222	Introduction to Audiology	3cr
SPLP 242	Speech Science I	3cr
SPLP 251	Anatomy and Physiology of the Speech and Hearing Mechanism	3cr
SPLP 311	Aural Rehabilitation	3cr (1)
SPLP 334	Language Development	3cr
SPLP 342	Speech Science II	3cr
SPLP 406	Articulation and Language Disorders	3cr
SPLP 408	Stuttering and Voice Disorders	3cr

**Free Electives:** EDUC 499 and SPLP 420 recommended 21 or 31

**General Track** 31cr

**Pre-Teacher Certification Track** 21cr

**Total Degree Requirements:** 120

(\*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.

- (1) A minimum cumulative 3.0 GPA is required to enroll in all 300- and 400-level courses for both pre-teacher certification and noncertification speech-language pathology majors.

### D. Deaf Education

Completion of the sequence of courses in Deaf Education leads to a Bachelor of Science degree in Education and Pennsylvania Department of Education certification as a teacher, “Special Education–Hearing Impaired, N-12” and “Elementary Education, K-6.” Students are provided with the basic skills to teach in special classes for hard-of-hearing or deaf individuals, as well as in regular elementary education.

Students enrolled in this sequence of study are prepared to assume positions as itinerant hearing therapists and classroom teachers for individuals ranging from preschoolers to adults. Work settings may include public schools, continuing education programs, and home training situations. Observations, clinical experience, and practica are required prior to placement in a school environment for the student teaching experience.

### Bachelor of Science in Education–Deaf Education (\*)

(Note: Sequence of courses will be altered, pending alignment with PDE requirements for 2010-2011.)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 151, MATH (1)

**Social Science:** PSYC 101

**Liberal Studies Electives:** 0cr

**College:** 30

**Preprofessional Education Sequence:**

COMM/EDEX 103 Digital Instructional Technology (2) 3cr

EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

EDHL 360 General Methodology for Education of Deaf and Hard-of-Hearing Persons I 2cr

EDHL 361 General Methodology for Education of Deaf and Hard-of-Hearing Persons II 2cr

EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr

EDUC 242 Pre-Student Teaching Clinical Experience I 1cr

EDUC 342 Pre-Student Teaching Clinical Experience II 1cr

EDUC 421 Student Teaching–Hearing Impaired (Pri-Elem) 6cr

EDUC 441	Student Teaching-Hearing Impaired (Jr-Sr H.S.)	6cr
EDUC 442	School Law	1cr
<b>Major:</b> 42		
<b>Required Courses:</b>		
EDEX 111	Introduction to Exceptional Persons	3cr
EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	1cr
EDHL 215	Intermediate American Sign Language	2cr
EDHL 307	Speech for Deaf and Hard-of-Hearing Persons	3cr
EDHL 308	Language for Deaf and Hard-of-Hearing and English Language Learners	3cr
EDHL 314	Deaf Culture	3cr
EDHL 317	Sign Language in Educational Settings	2cr
EDHL 329	Teaching Collaborative Practicum I	1cr
EDHL 330	Teaching Collaborative Practicum II	2cr
EDHL 415	ASL Pedagogy	1cr
EDHL 451	Reading for Deaf, Hard-of-Hearing, and English Language Learners	3cr
EDHL 465	Parent-Preschool Programs for Deaf and Hard-of-Hearing Children	3cr
SPLP 222	Introduction to Audiology	3cr
SPLP 311	Aural Rehabilitation	3cr
<b>Controlled Elective:</b>		
CDFR 218 <i>or</i> EDEX 112		3cr

**Free Electives:** 3

**(#) Total Degree Requirements:** 120

- (\*) A minimum cumulative and major GPA of 3.0 is required to enroll in all 300- and 400-level courses. See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.
- (1) Pennsylvania Department of Education requires two college-level (6cr) math courses. Students may take any Liberal Studies MATH course to fulfill this requirement and the 3cr of Liberal Studies Elective requirement.
- (2) EDEX 103 is a department-specific equivalent version of the COMM course.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the Requirements for Graduation section of this catalog.

### Deaf Studies Minor

A minor in Deaf Studies introduces the participant to essential information regarding hearing loss and deaf culture. In addition, basic sign language skills are developed. This course of study enables individuals to have a better understanding of the needs of deaf and hard-of-hearing persons and to communicate with deaf persons at a basic level.

The minor is an 18-credit program with 12 required and 6 elective credits. Required credits include the core courses which are essential to understanding the language and culture of the deaf community. The elective credits allow the minor candidate to select a more focused area of concentration.

Students must maintain a cumulative GPA of not less than 2.8 to enter and complete the minor. Except for the introductory courses, EDHL 114 and 115, only students who have officially declared a Deaf Studies minor will be able to schedule the designated courses. The grade received in American Sign Language courses must be a "C" or better to complete the minor.

This minor would be of interest to Anthropology, Criminology, Education, Nursing, Psychology, and Sociology majors and anyone else who is interested in interacting with deaf or hard-of-hearing persons.

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## Minor-Deaf Studies 18

### Required Courses:

EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	1cr
EDHL 215	Intermediate American Sign Language	2cr
EDHL 308	Language for Deaf and Hard-of-Hearing Persons	3cr
EDHL 314	Deaf Culture	3cr

### Controlled Electives: Select 6cr from the following:

EDEX 111	Introduction to Exceptional Persons	3cr
EDHL 465	Parent-Preschool Programs for Deaf and Hard-of-Hearing Children	3cr
SPLP 222	Introduction to Audiology	3cr

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## E Disability Services

Completion of this multidisciplinary curriculum in educational, social, and natural sciences prepares graduates to work as professionals serving individuals with disabilities in a wide array of public and private sector agencies and service providers, including adult Mental Health/Mental Retardation (MH/MR) programs. Students who complete the program will earn a Bachelor of Science degree and will be prepared for employment as instructional assistants in public or private schools, as therapeutic staff support personnel, or in a wide variety of capacities in MH/MR programs, community-based employment/living programs, early intervention programs, residential treatment programs, preschool/day care programs, and other agency service providers for individuals with disabilities. The minimum standard of eligibility for entrance into the program is a 2.75 GPA.

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## Bachelor of Science-Disability Services

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** 3cr

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 3cr, CDFR 224

**Major:** 48

### Required Courses:

CDFR 218	Child Development	3cr
CDFR 310	Childhood Observation and Assessment	3cr
CDFR 315	Introduction to Early Intervention	3cr
EDEX 111	Introduction to Exceptional Persons	3cr
EDEX 340	Introduction to Behavior Management in Special Education	3cr
EDEX 415	Preschool Education for Children with Disabilities	3cr
EDEX 458	Transition for Youth with Disabilities	3cr
EDEX 460	Family Perspectives on Disability	3cr
EDEX 469	Education of Persons with Emotional/Behavioral Disorders, Learning Disabilities, or Brain Injury	3cr
EDEX 478	Education of Persons with Mental Retardation/Developmental Disabilities and Physical/Multiple Disabilities	3cr
EDEX 493	Internship/Field Training	12cr
EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	1cr

### Other Requirements:

#### Professional Sequence:

EDEX 103	Special Education Technology <i>or</i>	
COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Free Electives:** (1) 18  
Students may use these 18cr toward study of a minor discipline and/or as free electives.

- (1) It is recommended that students pursue minor studies in one of the following minor tracks: Child Development and Family Relations (18cr), Deaf Studies (18cr), Educational Psychology (15cr), Psychology (18cr), or Sociology (18cr).
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## Department of Student Affairs in Higher Education

**Website:** [www.iup.edu/sahe](http://www.iup.edu/sahe)

**Dr. Linda M. Hall, Chairperson;** Belch, Lowery, Mueller; professors emeriti Lunardini, Thomas

The department offers a Master of Arts degree in Student Affairs in Higher Education. Students in this program prepare to be professional practitioners in two- and four-year colleges and universities in a variety of administrative areas, i.e., admissions, housing and residence life, student development programs, student activities and organizations, Greek affairs, registration, financial aid, career planning and development, minority affairs, health services, athletics, advising and testing, international student services, and counseling programs. Please refer to the *Graduate School Catalog* for further details.

# The College of Fine Arts

Michael J. Hood, Dean

Jan A. Mellon, Assistant Dean for Curriculum and Instruction

Website: [www.iup.edu/finearts](http://www.iup.edu/finearts)

The College of Fine Arts has professional degree programs in Art, Music, Theater and Dance, and Interdisciplinary Fine Arts and awards the Bachelor of Arts and the Bachelor of Fine Arts degrees. Programs leading to certification to teach art and music are offered in cooperation with the College of Education and Educational Technology. This partnership leads to the Bachelor of Science in Education degree. The college also offers minors in art, music, theater, and dance.

With one of the largest arts programs in the commonwealth, IUP's College of Fine Arts offers dedicated facilities for each department, augmented by a 1,600-seat auditorium, two theaters, three art galleries, a university museum, a recital hall, a computer laboratory, and a state-of-the-art dance studio. In Fall 2005, a large, renovated teaching location for sculpture and clay opened for art students, and in Spring 2006, a newly renovated and beautifully enlarged music building opened for music students and faculty. The music facility is one of the best university music teaching facilities in Pennsylvania, while the new location for sculpture and clay offers large open space, providing students the opportunity to increase their undergraduate art experience. The college sponsors two hundred to three hundred arts events annually, and its students, who currently enjoy the strongest academic profile of any of the university's colleges, have opportunities to develop their talents locally, regionally, and nationally. The college has an active international program for student exchange with a long-established, field-based program.

There are no additional college requirements for graduation beyond the university and departmental requirements listed in other sections of this catalog.

## Mission Statement

The mission of the College of Fine Arts at IUP is to provide excellent programs of study for all of its majors, balancing high professional standards with rigorous and current educational practice, and to provide coursework and programs of an equally high standard in service to majors in other departments which may require arts classes and, as part of the university's general studies mandate, to the entire university student body.

The College of Fine Arts takes as its special mission the presentation of arts events including plays, concerts, exhibitions, and recitals, featuring the work of students and faculty as well as the work of visiting arts professionals, as a gift of enrichment and as a celebration of the human spirit for the university, the community, and the region.

Finally, the college takes as its mandate and its privilege the inclusion in its presentations, studios, and classrooms the works, thoughts, and performances of a culturally and ethnically diverse world of art.

## College Majors

- **Art** (History or Studio Track)—B.A.
- **Art Education**—B.S.Ed.
- **Art Studio**—B.F.A.
- **Interdisciplinary Fine Arts** (Dance Arts or Musical Theater Track)—B.A.
- **Music** (General Studies or Composition Track)—B.A.
- **Music Education**—B.S.Ed.
- **Music Performance**—B.F.A.
- **Theater**—B.A.

## College Minors

- **Art History**
- **Art Studio**
- **Dance**
- **Entrepreneurship for the Arts**
- **Music**
- **Theater**

## Major in Interdisciplinary Fine Arts

The Interdisciplinary Fine Arts major is available for students desiring to combine coursework within the departments of Art, Music, and Theater and Dance and selected courses within other colleges. Students must enter into a college department through an audition. Students select specific "tracks" which are tailored to the areas of Musical Theater and Dance Arts. This program is designed around core components within the liberal arts and the fine arts and is also specifically designed for the student who has exceptional skill in more than one area of the arts. The interdisciplinary major also includes the opportunity for an internship. The internships would include work within the performance arena. This program is coordinated through the Office of the Dean, College of Fine Arts, where additional information is available.

### Musical Theater Track

The Interdisciplinary Fine Arts degree focuses on music theater with a full integration of music, dance, and theater. Students must audition in music, theater, and dance. In order to be accepted into this track, a student would need to pass the audition in music and a second audition in either theater or dance. As students plan their program, they need to be aware that a State System Board of Governors' policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 and above.

## Bachelor of Arts—Interdisciplinary Fine Arts/Musical Theater Track (1)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Fine Arts:** DANCE 102 or MUHI 101

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr

**Major: (1)** 40

### Required Courses:

**Dance:** 6-12cr

DANC 102 Introduction to Dance (2) 3cr

DANC 150 Fundamentals of Dance (3) 3cr

DANC 260 Beginning Jazz Dance (4) *or* 3cr

DANC 485 Dance Studio: Jazz

DANC 270 Beginning Ballroom and Tap Dance (5) *or* 3cr

DANC 485 Dance Studio: Ballroom and Tap

**Music:** 9-12cr

MUHI 101 Introduction to Music (6) 3cr

MUSC 111 Theory Skills I 2cr

MUSC 115 Theory I 3cr

APMU 105 Voice I 1cr

APMU 155 Voice II 1cr

APMU 205 Voice III 1cr

APMU 255 Voice IV 1cr

**Theater:** 9cr

THTR 111 Foundations of Theater 3cr

THTR 240 Acting I 3cr

THTR 487 Acting Studio 3cr

**Ensemble/Production Requirements: (7)** 4-6cr

MUSC 126 Music Theater 1-3cr

THTR 486 Practicum in Production (8) .5-3cr

**Required Electives: (9)** 4-9

### Dance:

DANC 250 Beginning Modern Dance 3cr

DANC 280 Beginning Ballet 3cr

DANC 290 Ethnic Dance 3cr

DANC 351 Choreography 3cr

DANC 485 Dance Studio: Modern 3cr

DANC 485 Dance Studio: Ballet 3cr

<b>Music:</b>		
MUSC 112	Theory Skills II	2cr
MUSC 116	Theory II	3cr
MUSC 153	Class Piano I	1cr
MUSC 154	Class Piano II	1cr
MUSC 351	Italian Diction and Literature	1cr
MUSC 353	French Diction and Literature	1cr
MUSC 354	German Diction and Literature	1cr

<b>Theater:</b>		
THTR 116	Fundamentals of Theatrical Design	3cr
THTR 120	Stagecraft	3cr
THTR 122	Costume Workshop	3cr
THTR 130	Stage Voice	3cr
THTR 131	Stage Movement	3cr
THTR 221	Basic Stage Lighting	3cr
THTR 223	Makeup for the Stage	3cr
THTR 341	Acting Styles	3cr
THTR 350	Directing	3cr
THTR 484	Direction Studio	3cr
THTR 487	Acting Studio	3cr

**Controlled Electives:** (as advised) 0-6  
APMU 305, 355, 405, 455, MUSC 126, THTR 486

**Free Electives:** 21-27

**Total Degree Requirements:** 120

- (1) State System Board of Governors' policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 and above.
- (2) If a student in this track selects DANC 102 for the Liberal Studies requirement in the Fine Arts, this requirement is satisfied by that choice.
- (3) Students with considerable dance training in three or more dance genres would not be required to take this course.
- (4) Choice of level of Jazz course would depend upon previous training level of student.
- (5) Choice of level of Ballroom/Tap course would depend upon previous training level of student.
- (6) Required for major unless MUHI 101 has been used for the Liberal Studies Fine Arts requirement.
- (7) Ensemble/production experiences over a minimum of six semesters. At least two production experiences need to be nonperformance experiences.
- (8) In the last year of this track, students would be required to do a major production responsibility under THTR 486 as a Senior Project in Music-Theater.
- (9) As advised and in addition to any course listed above as an alternative.

### Dance Arts Track

The Interdisciplinary Fine Arts/Dance Arts Track focuses on the art of dance with a primary integration of dance and theater and a secondary integration of music and/or art. Students can be admitted to this track after completion of both dance and theater auditions and/or interviews.

### Bachelor of Arts—Interdisciplinary Fine Arts/Dance Arts Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Fine Arts:** MUHI 101

**Liberal Studies Electives:** 9cr, no courses with FIAR prefix

**Major:** (1) 35-39

#### Required Courses:

<b>Dance:</b>		
DANC 102	Introduction to Dance	3cr
DANC 351	Choreography	3cr
DANC 355	Dance Production: Administration to Creation	3cr
<b>Dance Technique:</b> Select 17-21cr from the following:		
DANC 250	Beginning Modern Dance <i>or</i>	3cr
	DANC 485 Dance Studio: Modern	

DANC 260	Beginning Jazz Dance <i>or</i>	3cr
	DANC 485 Dance Studio: Jazz	
DANC 270	Beginning Ballroom and Tap Dance <i>or</i>	3cr
	DANC 485 Dance Studio: Ballroom and Tap	
DANC 280	Beginning Ballet <i>or</i>	3cr
	DANC 485 Dance Studio: Ballet	
DANC 290	Ethnic Dance	3cr
THTR 486	Practicum in Production (2)	2-6cr

**Theater:** Select one 3cr course from the following:

THTR 116	Fundamentals of Theatrical Design	3cr
THTR 122	Costume Workshop	3cr
THTR 221	Basic Stage Lighting	3cr
THTR 223	Makeup for the Stage	3cr

#### Ensemble/Production/Exhibition Requirements:

Select 6cr from the following:

MUSC 126	Music Theater	1-3cr
THTR 486	Practicum in Production (Dance, Theater, Musical, or Opera)	1-3cr
THTR 486	Practicum in Production: Senior Project	1-3cr

**Controlled Electives:** (as advised) 7-11

ART 112, 113, 215, DANCE 353, 485, FSMR 456, HPED 221, MUSC 110, 115, 126, THTR 116, 122, 221, 223, 321, 322, 486 (2-6cr)

**Free Electives:** 21

**Total Degree Requirements:** 120

- (1) Total credits for Major Required and Controlled Electives must be 46.
- (2) The foci of these practicum options could be in dance, theater, musical, or opera. In addition, at least 2cr would be required for a senior thesis project in practicum in dance production.

### Minor in Entrepreneurship for Fine Arts

This minor for nonbusiness majors program assumes no prior knowledge of business. Fine arts students are often involved in starting and running their own business, developing and starting small performing groups, and developing and running nonprofit community theaters. Students would develop the skills necessary to evaluate opportunities within their industry. They would learn, among other things, to 1) analyze their competition, 2) develop marketing and financial plans, 3) explain intellectual property rights, 4) negotiate contracts, and 5) write a business plan that could be used to obtain financing from banks, investors, or other sources of funding. These skills are all central to the creation and development of new ventures. This is a joint effort of four departments and represents an 18-credit minor for fine arts majors. The program is designed to give nonbusiness majors a general background in starting and running a small business.

### Minor—Entrepreneurship for Fine Arts 18

ACCT 200	Foundations of Accounting	3cr
BTST 321	Business and Interpersonal Communications	3cr
MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 325	Small Business Management	3cr
MGMT 450	Case Studies in Arts Management	3cr
MKTG 311	Arts Marketing	3cr

### Department of Art

**Website:** [www.iup.edu/art](http://www.iup.edu/art)

**Andrew W. Gillham, Chairperson;** Ciganko, Fortushniak, Kabala, LaRoche, Loar, Mambo, Matsubara, Mitchell, Palmisano, Rode, Sweeny, Turner; and professors emeriti Ali, Balsiger, Battaglini, Ben-Zvi, Burwell, Clay, DeFurio, Dongilla, Dropcho, Hamilton, Hedman, Vislosky, Wert

The Department of Art provides a sequence of foundation and advanced-level courses directed toward the development of the student's creative and expressive abilities. Degrees offered are the Bachelor of Fine Arts degree with a major in Studio, Bachelor of Arts degree with a major in Art/Studio, Bachelor of Arts degree with a major in Art/History, and Bachelor of Sci-

ence in Education degree with a major in Art Education. Minors in the department include Art Studio and Art History.

Students pursuing studio or art education degrees are initially admitted into the department through the Entrance Portfolio Review. Art history majors are not required to submit a portfolio. Students interested in pursuing the Bachelor of Fine Arts degree with a major in Studio are initially admitted into the Bachelor of Arts degree with a major in Art/Studio and may transfer into the B.F.A.–Studio program at the end of the sophomore year by successfully completing the B.F.A. Sophomore Review.

The Bachelor of Fine Arts degree with a major in Studio prepares students for careers as professional visual artists and is a platform from which they might go on to study for the Master of Fine Arts level, the terminal degree in the field. The Bachelor of Fine Arts degree with a major in Studio offers three studio emphasis tracks: the Two-Dimensional Emphasis Track (including: drawing, graphic design, painting, and print media), the Three-Dimensional Emphasis Track (including: ceramics, fibers, jewelry and metals, sculpture, and wood and furniture design), and the Individualized Studio Emphasis Track (in which students are able to build a degree program to meet specialized individual needs).

The Bachelor of Arts degree with a major in Art/Studio offers students a broad range of advanced studio options.

The mission of the Bachelor of Arts degree with a major in Art/History is to provide art history majors with a solid foundation in the history of art, from ancient through modern times. The degree prepares students for graduate study leading to careers in museums, galleries, fine art libraries, visual resources, teaching, and research. Specific goals, objectives, and competencies related to this degree include the acquisition and demonstration of critical thinking, research, and writing skills; knowledge of terminology, methodology, and competency with various approaches to art historical inquiry; and the ability to conduct art history research through independent investigations.

The Bachelor of Science in Education degree with a major in Art Education is a professional degree program leading to certification to teach K-12 art in the Commonwealth of Pennsylvania. The program reflects contemporary theory and practice in art studio, art history, criticism, aesthetics, visual culture, and pedagogy. The program complies with all Pennsylvania standards needed for certification to teach art in the commonwealth.

All art majors are obligated to fulfill the university requirement for Liberal Studies coursework. Art Education majors must achieve and maintain a 3.0 cumulative GPA. Bachelor of Fine Arts-Studio majors must achieve a 2.5 cumulative GPA and earn a grade of C or better in all ART and ARHI courses to graduate.

A Minor in Art Studio is available to majors within the department whose major area of study is Art Education or Art History; this provides further exploration in the various studio disciplines. Additionally, the Minor in Art Studio provides majors from other disciplines the opportunity to experience the visual arts in greater depth.

The mission of the Art History Minor is to provide students with the necessary skills to critically assess the origins and changing dynamics of the visual arts. By its very nature, Art History is multidisciplinary and not only develops visual literacy and tools for critical thinking but also introduces students to the sociocultural contexts in which artworks are produced, providing students with the opportunities for understanding cultural diversity and lifelong learning.

The College of Fine Arts and the Department of Art have established an exchange program with the National Art Academies of Slovenia and Croatia. Qualified and highly skilled juniors and seniors may participate in the exchange by application to the Art Department exchange coordinator and with approval of their major studio professor, the Department of Art chair, and the College of Fine Arts exchange coordinator.

For detailed information regarding application to one of the degree programs and scheduling a Portfolio Review, please call the department office at 724-357-2530 or by e-mail through the website [www.iup.edu/art](http://www.iup.edu/art).

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## Bachelor of Arts–Art/History Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** 3cr

**Liberal Studies Electives:** 6cr, no courses with ARHI prefix

**Major:**

**Foundation Required:** 18

ARHI 205 Ancient to Medieval Art 3cr

ARHI 207 Renaissance through Modern Art 3cr

ARHI 224 Introduction to Asian Art 3cr

ARHI 413 Senior Seminar 3cr

ART 112 Fundamentals of Drawing 3cr

ART 114 Color and Two-Dimensional Design 3cr

**Controlled Electives:** Choose from the following: 27

Up to 6cr (2 courses) of Art Studio, prefix ART

ARHI 100, 222, 300, 407, 408, 409, 410, 411, 412, 416, 417, 418, 423, 425, 493

**Foreign Language Required:** 12

Foreign Language Intermediate Level (1)

**Free Electives:** 13

**Total Degree Requirements:** 120

(1) Intermediate-level foreign language may be included in Liberal Studies Electives.

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## Bachelor of Arts–Art/Studio

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Fine Arts:** ARHI 205

**Mathematics:** 3cr

**Liberal Studies Electives:** 3cr, ARHI 207, no courses with ART prefix

**Major:**

**Foundation Required:** 12

ART 111 Figure Drawing 3cr

ART 112 Fundamentals of Drawing 3cr

ART 113 Three-Dimensional Design 3cr

ART 114 Color and Two-Dimensional Design 3cr

**Level II Studio Electives:** (select 6 of the following 8 courses) 18

ART 211, 213, 214, 215, 216, 217, 218, 219

**Art History Required:** 6

ARHI 100 Arts of the Twentieth Century 3cr

Controlled Art History Elective (Select one course in the

last three semesters: ARHI 413, 417, 423, or 425.

Course must be designated /W/.)

**Advanced Studio Required:** 21

Advanced Studio courses from the following: (1, 2)

ART 316 Intermediate Jewelry and Metals 3cr

ART 355 Intermediate Graphic Design I 3cr

ART 356 Intermediate Graphic Design II 3cr

ART 421 Advanced Drawing 3cr

ART 451 Advanced Woodworking: Function and Form 3cr

ART 452 Advanced Ceramics 3cr

ART 453 Advanced Sculpture 3cr

ART 454 Advanced Painting 3cr

ART 455 Advanced Graphic Design I 3cr

ART 456 Advanced Graphic Design II 3cr

ART 457 Advanced Print Media 3cr

ART 459 Advanced Fibers 3cr

ART 460 Advanced Jewelry and Metals 3cr

ART 481 Special Topics 3cr

ART 493 Internship 3cr

**Free Electives:** 15



- (#) **Total Degree Requirements:** 120
- (1) Students must complete 3cr within an advanced studio before permission will be granted to enroll in the 6cr component of the advanced level. Permission of the instructor is a prerequisite to all 6cr advanced courses.
  - (2) Inclusion of internship credit toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

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### Bachelor of Fine Arts—Art Studio

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Fine Arts:** ARHI 205

**Mathematics:** 3cr

**Liberal Studies Electives:** 3cr, ARHI 207, no courses with ART prefix

**Major:**

**Foundation Required:** 12

ART 111	Figure Drawing	3cr
ART 112	Fundamentals of Drawing	3cr
ART 113	Three-Dimensional Design	3cr
ART 114	Color and Two-Dimensional Design	3cr

**Level II Studio Electives:** (Select 6 of the following 8 courses) 18  
ART 211, 213, 214, 215, 216, 217, 218, 219

**Art History Required:** 6

ARHI 100	Arts of the Twentieth Century	3cr
Controlled Art History Elective (Select one course in the last three semesters: ARHI 413, 417, 423, or 425. Course must be designated /W/.)		3cr

**Advanced Studio Required:** 27  
(Select 1 of 3 Advanced Studio Emphasis Tracks)

**Three-Dimensional Studio Track:**

Advanced 3-D studios include: (1, 2)

ART 316	Intermediate Jewelry and Metals	3cr
ART 451	Advanced Woodworking: Function and Form	3cr
ART 452	Advanced Ceramics	3cr
ART 453	Advanced Sculpture	3cr
ART 459	Advanced Fibers	3cr
ART 460	Advanced Jewelry and Metals	3cr
ART 481	Special Topics	3cr
ART 493	Internship	3cr
Primary Advanced Studio (choose one studio area above)		15cr
Synthesis Advanced Studios (choose three other 3-D advanced studios)		9cr
Two-Dimensional Studio (choose one from advanced 2-D studio options)		3cr

**Two-Dimensional Studio Track:**

Advanced 2-D studios include: (1, 2)

ART 355	Intermediate Graphic Design I	3cr
ART 356	Intermediate Graphic Design II	3cr
ART 421	Advanced Drawing	3cr
ART 454	Advanced Painting	3cr
ART 455	Advanced Graphic Design I	3cr
ART 456	Advanced Graphic Design II	3cr
ART 457	Advanced Print Media	3cr
ART 481	Special Topics	3cr
ARHI 493	Internship	3cr
Primary Advanced Studio (choose one studio area above)		15cr
Synthesis Advanced Studios (choose three other 2-D advanced studios)		9cr
Three-Dimensional Studio (choose one from advanced 3-D studio options)		3cr

**Individualized Advanced Studio Track:**

(Student with specialized interest can submit a proposal for advanced studio study. Approval required by department chair, studio division chair, and student's major advisor.) 27cr  
Select 27cr from the following: (1, 2)

ART 316	Intermediate Jewelry and Metals	3cr
ART 355	Intermediate Graphic Design I	3cr
ART 356	Intermediate Graphic Design II	3cr
ART 421	Advanced Drawing	3cr
ART 451	Advanced Woodworking: Function and Form	3cr
ART 452	Advanced Ceramics	3cr
ART 453	Advanced Sculpture	3cr
ART 454	Advanced Painting	3cr
ART 455	Advanced Graphic Design I	3cr
ART 456	Advanced Graphic Design II	3cr
ART 457	Advanced Print Media	3cr
ART 459	Advanced Fibers	3cr
ART 460	Advanced Jewelry and Metals	3cr
ART 481	Special Topics	3cr
ART 493	Internship	3cr

**Controlled Advanced Studio Electives:** (1, 2) 6

Select 6cr from the following: ART 316, 355, 356, 421, 451, 452, 453, 454, 455, 456, 457, 459, 460, 481, 493

**Senior Thesis and Professional Practicum** 3

ART 400	Professional Practices	3cr
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(#) **Total Degree Requirements:** 120

- (1) Students must complete 3cr within an advanced studio before permission will be granted to enroll in the 6cr component of the advanced level. Permission of the instructor is a prerequisite to all 6cr advanced courses.
  - (2) Inclusion of internship credits toward any portion of fulfillment of degree requirements must be approved by the departmental chair and student's major advisor. Approval must be obtained in writing prior to enrollment.
  - (3) To enter program, art major must successfully complete the B.F.A. Sophomore Review and have minimum 2.5 GPA overall.
  - (4) Student must achieve a cumulative 2.5 GPA and earn a "C" or better in all ART and ARHI courses to graduate.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

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### Bachelor of Science in Education—Art Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Fine Arts:** fulfilled by ARHI 205

**Mathematics:** 6cr

**Social Science:** PSYC 101

**Liberal Studies Electives:** 0cr

**College:** 23

**Preprofessional Education Sequence:**

COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Professional Education Sequence:**

EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 421	Student Teaching (Elementary)	6cr
EDUC 441	Student Teaching (Secondary)	6cr
EDUC 442	School Law	1cr

**Major:** 24

ART 112	Fundamentals of Drawing	3cr
ART 113	Three-Dimensional Design	3cr
ART 114	Color and Two-Dimensional Design	3cr
ARHI 207	Renaissance to Modern Art	3cr

ARED 315	Issues of Art in K-12 Programs	3cr	
ARED 317	Art in K-6 Programs	3cr	
ARED 318	Art in 7-12 Programs	3cr	
ARED 320	Art Criticism and Aesthetics in K-12 Programs	3cr	
<b>Controlled Electives:</b>			30
Select 15cr from the following: ARHI 100, ART 111, 211, ART 213, 214, 215, 216, 217, 218, 219			15cr
Select 12cr from any ARHI or ART prefix			12cr
Select 3cr from any ARED prefix			3cr
<b>(#) Total Degree Requirements:</b>			125
(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.			
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.			

### Minor—Art History 18

<b>Required Courses:</b>			9
ARHI 205	Ancient to Medieval Art	3cr	
ARHI 207	Renaissance through Modern Art	3cr	
ARHI 224	Introduction to Asian Art	3cr	

**Three additional courses with an ARHI prefix except ARHI 101** 9

### Minor—Art Studio 18

<b>Three courses from the following:</b>			9
ART 111	Figure Drawing	3cr	
ART 112	Fundamentals of Drawing	3cr	
ART 113	Three-Dimensional Design	3cr	
ART 114	Color and Two-Dimensional Design	3cr	
ART 211	Painting	3cr	
ART 213	Woodworking: Function and Form	3cr	
ART 214	Ceramics	3cr	
ART 215	Sculpture	3cr	
ART 216	Jewelry and Metals	3cr (1)	
ART 217	Print Media	3cr	
ART 218	Graphic Design	3cr (1)	
ART 219	Fibers	3cr	
ART 281	Special Topics	3cr	

<b>Three courses from the following:</b>			9
ART 316	Intermediate Jewelry and Metals	3cr	
ART 355	Intermediate Graphic Design I	3cr	
ART 356	Intermediate Graphic Design II	3cr	
ART 421	Advanced Drawing	3cr	
ART 451	Advanced Woodworking: Function and Form	3cr	
ART 452	Advanced Ceramics	3cr	
ART 453	Advanced Sculpture	3cr	
ART 454	Advanced Painting	3cr	
ART 455	Advanced Graphic Design I	3cr	
ART 456	Advanced Graphic Design II	3cr	
ART 457	Advanced Print Media	3cr	
ART 459	Advanced Fibers	3cr	
ART 460	Advanced Jewelry and Metals	3cr	
ART 481	Special Topics	3cr	

(1) Courses have prerequisites. Check the catalog for details, and discuss your course of study with your Minor Advisor. The instructor may choose to waive the prerequisite for Art Studio Minors.

## Department of Music

**Website:** [www.iup.edu/music](http://www.iup.edu/music)

**Jack Stamp, Chairperson;** Antonacos, Baumer, Baunoch, Caulder, Chepaitis, Clewell, Collins, Dickinson, Eisensmith, D. Ferguson, L. Ferguson, Horner, Jennings, Kingan, Kuehn, Logan-Hastings, Mantel, Martynuik, Perlongo, Santos, Scandrett, Wacker, Wheatley, Wong Doe, Worzby, Young; and professors emeriti Adams, Becker, Bird, Borst, Casavant, Dietz, Fry, Lloyd, Olmstead, Perkins, Radell, Thorell, Vansteenkist, Weber, Wilson

The Department of Music has a threefold mission: 1) professional preparation of music educators, performers, composers, conductors, and musicologists, 2) liberal studies for the university, and 3) programs, education, and resources of music for the community. Degrees offered are the Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science in Education.

Admission to the Music Department requires satisfactory completion of an audition in addition to the university general requirements. Detailed information will be sent to the applicant upon request.

The program leading to the Bachelor of Arts degree with a major in Music contains two tracks: Music/General Studies or Music/Composition. The General Studies Track is designed to give the student a general experience in music within a liberal arts degree and allows students to explore a minor in another area. The Music/Composition Track is a specialized program that will prepare the student for graduate studies or a career in music composition. Students wanting to choose the Composition Track must audition to enter the Music Department in any other music degree. Entrance to the Composition Track occurs after completion of Theory I-IV, Theory Skills I-IV, and Composition I, which, for the prospective major, is to be taken concurrently with Theory IV and Theory Skills IV. On completion of these courses with a 3.00 GPA or higher, the Theory Composition area coordinator will advise the student into the Bachelor of Arts Music/Composition Track. The prospective major must begin study of piano (either Class Piano or Applied Piano, depending on the results of the piano audition) within the freshman year in order to complete the 14-credit piano requirement within four years.

The program leading to the Bachelor of Fine Arts degree with a major in Music Performance (equivalent to the Bachelor of Music Degree) is a special program with a major in one of twenty-one areas of performance. The student in this program prepares to pursue a career as a professional performing musician.

The program leading to the Bachelor of Science in Education degree with a music major leads to certification to teach in the schools of Pennsylvania.

A student wishing to minor in music must elect a minimum of 15 credits in music courses as approved by the department chairperson. An audition for admission is required.

### Special Requirements for all Music Majors

1. Each student must declare a primary performing medium. Those who elect voice as their primary instrument normally elect piano as a secondary instrument. Performance juries are held at the end of each semester. Students are expected to complete the requirements for their performing area and level. **Piano proficiency is required in all degree programs.**
2. Ensemble participation of 5 hours a week is required each semester. Students may fulfill this departmental requirement by participation in either 1-credit or 0-credit ensemble(s). In meeting the degree requirements of 4-8 credits of ensemble credit, enrollment in credit-bearing ensembles is flexible across semesters.
3. Students must register for MUSC 475 (Music Lab) and attend four departmental meetings and eight campus performances such as recitals, concerts, art exhibits, and theater productions each semester as required by the degree program (seven semesters for the B.S.Ed. program and eight semesters for the B.A. and B.F.A. programs).

## Bachelor of Arts–Music/General Studies Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Fine Arts:** MUHI 102

**Humanities Literature:** One course from the following:

ENGL 210-214, 225-226, or 340-398

**Mathematics:** MATH 101 or other Liberal Studies Mathematics

**Natural Science:** Option II recommended, PHYS 105 recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 6cr, MUHI 301, no courses with MUSC prefix

**Major:** 43

**Required Courses: (1)**

APMU (Major) Applied Music I-VI (2cr each)	12cr
APMU 122 (Major) Applied Jury A	0cr
MUHI 302 Music History II	3cr
MUSC 111 Theory Skills I	2cr
MUSC 112 Theory Skills II	2cr
MUSC 115 Theory I	3cr
MUSC 116 Theory II	3cr
MUSC 120-136 4 semesters of Music Ensembles	4cr
MUSC 153 Class Piano I	1cr
MUSC 154 Class Piano II	1cr
MUSC 211 Theory Skills III	2cr
MUSC 212 Theory Skills IV	2cr
MUSC 215 Theory III	3cr
MUSC 216 Theory IV	3cr
MUSC 311 Fundamentals of Conducting	2cr
MUSC 475 8 semesters of Recital Attendance	0cr

**Controlled Electives:** 5

Piano proficiency required	
MUSC 180 Technology for General Musicianship	2cr
Music Electives (with advisor approval or as indicated below):	
MUSC 217 (required for piano and organ majors only)	3cr
MUSC 351/353/354 (required for voice majors only)	3cr
Other courses with MUSC or MUHI prefix	0-3cr

**Free Electives: (2)** 22

**Total Degree Requirements:** 120

- (1) Students may satisfy any Theory Class by passing the final exam prior to or at the beginning of any given semester and then enrolling in Section 011 of the course for 0cr; the student's grade would be recorded as "Satisfactory" on the transcript.
- (2) Students are encouraged to consider a minor in another department.

## Bachelor of Arts–Music/Composition Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Fine Arts:** MUHI 102

**Humanities Literature:** Fulfilled by MUHI 102

**Mathematics:** MATH 101 or other Liberal Studies Mathematics

**Natural Science:** Option II recommended, PHYS 105 recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 9cr, MUHI 301, 302, no courses with MUSC prefix

**Major:** 62

**Required Courses: (1)**

APMU (Major) Applied Music I-VII (2cr each)	14cr
MUSC 111 Theory Skills I	2cr
MUSC 112 Theory Skills II	2cr
MUSC 115 Theory I	3cr
MUSC 116 Theory II	3cr
MUSC 120-136 4 semesters of Music Ensembles	4cr
MUSC 180 Technology for General Musicianship	2cr
MUSC 211 Theory Skills III	2cr

MUSC 212 Theory Skills IV	2cr
MUSC 215 Theory III	3cr
MUSC 216 Theory IV	3cr
MUSC 219 Keyboard Harmony	3cr
MUSC 311 Fundamentals of Conducting	2cr
MUSC 315 Theory V	3cr
MUSC 411 Composition I	2cr
MUSC 412 Composition II	2cr
MUSC 413 Composition III	2cr
MUSC 414 Composition IV	2cr
MUSC 415 Counterpoint I	3cr
MUSC 418 Form and Analysis I <i>or</i>	3cr
MUSC 417 Orchestration	
MUSC 475 8 semesters of Recital Attendance	0cr

**Controlled Electives:** 8

Piano proficiency required  
Music Electives (with advisor approval)

**Total Degree Requirements:** 120

- (1) Students may satisfy any Theory Class by passing the final exam prior to or at the beginning of any given semester and then enrolling in Section 011 of the course for 0cr; the student's grade would be recorded as "Satisfactory" on the transcript.

## Bachelor of Fine Arts–Music Performance

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Fine Arts:** MUHI 102

**Humanities Literature:** Fulfilled by MUHI 102

**Mathematics:** MATH 101 or other Liberal Studies Mathematics

**Natural Science:** Option II recommended, PHYS 105 recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 9cr, MUHI 301, 302, no courses with MUSC prefix

**Major:** 54-56

**Required Courses: (1)**

APMU (Major) Applied Music I-VIII (4cr each) (2)	30-32cr
APMU 122 (Major) Applied Jury A	0cr
MUSC 111 Theory Skills I	2cr
MUSC 112 Theory Skills II	2cr
MUSC 115 Theory I	3cr
MUSC 116 Theory II	3cr
MUSC 180 Music Technology for General Musicianship	2cr
MUSC 211 Theory Skills III	2cr
MUSC 212 Theory Skills IV	2cr
MUSC 215 Theory III	3cr
MUSC 216 Theory IV	3cr
MUSC 311 Fundamentals of Conducting	2cr
MUSC 475 8 semesters of Recital Attendance	0cr

**Controlled Electives (all concentrations):** 14-16

MUSC 120-136 Music Ensembles (3)  
Electives with MUSC or MUHI prefix

**Controlled Electives (Keyboard majors):**

MUSC 217 Keyboard Harmony	3cr
MUSC 405 Piano Pedagogy	3cr

**Controlled Electives (Vocal majors):**

APMU 101 Applied Piano I	2cr
APMU 123 Applied Jury B	0cr
APMU 152 Applied Piano II	2cr
MUSC 351 Italian Diction	1cr
MUSC 353 French Diction	1cr
MUSC 354 German Diction	1cr
MUSC 406 Vocal Pedagogy	2cr
Foreign Language	3cr

**Controlled Electives (String majors):**

MUSC 153 Class Piano I	1cr
MUSC 154 Class Piano II	1cr

APMU 124	Applied Jury C	0cr
MUSC 404	String Pedagogy	2 cr
<b>Controlled Electives (Wind and Percussion majors):</b>		
MUSC 153	Class Piano I	1cr
MUSC 154	Class Piano II	1cr
APMU 124	Applied Jury C	0cr
APMU 480	Wind and Percussion Pedagogy	2cr

**Total Degree Requirements:** 120

- (1) Students may satisfy any Theory Class by passing the final exam prior to or at the beginning of any given semester and then enrolling in Section 011 of the course for 0cr; the student's grade would be recorded as "Satisfactory" on the transcript.
- (2) Vocal, keyboard, and string majors will take eight semesters of 4cr lessons (32cr). Wind and percussion majors will take seven semesters of 4cr lessons and one semester of 2cr lessons (30cr).
- (3) Students are required to participate in ensembles for five hours a week each semester for eight semesters.

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### Bachelor of Science in Education–Music Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Fine Arts:** fulfilled by courses in the major

**Humanities:** MUHI 102

**Mathematics:** 6cr, MATH 101 or 110; MATH 217 recommended

**Natural Science:** Option I recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, MUHI 301, no course with MUSC prefix

**College:**

**Professional Education Sequence:** 29

EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDSP 102	Educational Psychology	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 421	Student Teaching Elementary Level	6cr
EDUC 441	Student Teaching Secondary Level	6cr
EDUC 442	School Law	1cr
MUSC 240	Technology in the Music Classroom	2cr
MUSC 331	Elementary Methods	2cr
MUSC 333	Instrumental Methods	2cr
MUSC 335	Music for Students with Disabilities in Inclusive Settings	1cr
MUSC 337	General/Choral Methods	2cr

**Major: (1)**

**Required Courses:**

APMU	(Major) Applied Music I-VII	14cr
APMU 122	(Major) Applied Jury A	0cr
MUHI 302	Music History II	3cr
MUSC 111	Theory Skills I	2cr
MUSC 112	Theory Skills II	2cr
MUSC 115	Theory I	3cr
MUSC 116	Theory II	3cr
MUSC 120-136	7 semesters of Music Ensembles	0cr
MUSC 211	Theory Skills III	2cr
MUSC 212	Theory Skills IV	2cr
MUSC 215	Theory III	3cr
MUSC 216	Theory IV	3cr
MUSC 311	Fundamentals of Conducting	2cr
MUSC 475	7 semesters of Recital Attendance	0cr

**Concentration area courses:** (select one concentration)

**Vocal Concentration**

APMU	Piano (minor) I-IV	4cr
APMU 123	Applied Piano Jury B	0cr

Select two of the following Class Instrument courses:

MUSC 155, 157, 159, 161	2cr
MUSC 351/353/354	3cr

**Instrumental Concentration**

APMU 124	Applied Piano Jury C	0cr
MUSC 151	Class Voice I	1cr
MUSC 152	Class Voice II	1cr
MUSC 153	Class Piano I	1cr
MUSC 154	Class Piano II	1cr
MUSC 155	Class Strings I	1cr
MUSC 157	Class Percussion I	1cr
MUSC 159	Class Brass I	1cr
MUSC 161	Class Woodwinds I	1cr

**Controlled Electives:** Select electives from the following

to create a total of 51cr in Major Required Courses area:

APMU Instrument (minor) I-IV (1cr each), MUSC 120, 155-162 (1cr each), 163, 224, 300, 312, 313, 315, 340, 411, 415, 417, 493

**Total Degree Requirements:** 128

(\*) Also see requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

- (1) Students may satisfy any Theory Class or Class Instrument/Minor Instrument requirement by
  - A. Theory–Passing the final exam prior to or at the beginning of any given semester and then enrolling in Section 011 of the course for 0cr; the student's grade would be recorded as "Satisfactory" on the transcript.
  - B. Class instrument or minor applied area–Passing the B or C required jury (0cr) before enrolling in class instruments or a minor applied course; the student's grade would be recorded as "Satisfactory" on the transcript.

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## Department of Theater and Dance

**Website:** [www.iup.edu/theater](http://www.iup.edu/theater)

**Brian R. Jones, Chairperson;** Blackledge, Boda-Sutton, Brown, Chimonides, Kemp, Liberta, McCreary, Van Dyke; and professors emeriti Eisen, Lommock, Simpson

The Department of Theater and Dance is dedicated to both theater and dance as collaborative and highly disciplined fields offering an extended view of the world as a part of a liberal and humanistic education. Successful students develop an artistic sensibility and a disciplined work ethic, skills necessary in most endeavors. The department is committed to:

1. providing comprehensive coursework from introductory through advanced levels of study, in all major areas of theater and dance
2. providing diverse production opportunities at all levels to challenge students as artists by developing proficiency in one or more of the areas of playwriting, research, performance, and production while stimulating the intellectual growth of both students and faculty
3. augmenting and complementing the aesthetic offerings of the university community
4. establishing a work ethic of collaboration, personal discipline, and respect

The department offers a Bachelor of Arts degree, a dance minor, and a theater minor. The B.A. degree with a major in Theater provides for the study of theater within a broad liberal arts education. The minor in dance totals 18 controlled credits, while a minor in Theater consists of 15 credits in Theater coursework approved by the chairperson of the department.

Theater and dance courses are also an option in the Interdisciplinary Fine Arts degree offered by the College of Fine Arts.

As a practical extension of the academic program, the department offers a variety of production opportunities in the Theater-by-the-Grove Mainstage and Studio theaters. The IUP Dance Theater performs twice annually.

Admission to the Theater major requires satisfactory completion of an audition or interview, in addition to the university's general admission requirements. Detailed information will be sent to applicants upon request. The Department of Theater and Dance is a fully accredited institutional member of the National Association of Schools of Theater (NAST).

### Bachelor of Arts--Theater

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Fine Arts:** ARHI 101, DANC 102, or MUHI 101

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with THTR prefix

**Major:** 40

**Required Courses:**

THTR 111 Foundations of Theater 3cr

THTR 116 Fundamentals of Theatrical Design 3cr

THTR 205 Classic Theater I *or* 3cr

THTR 206 Classic Theater II

THTR 207 Modern Theater I *or* 3cr

THTR 208 Modern Theater II

**Core Courses:** (minimum of 6cr from each area)

*Technical Core:*

THTR 120 Stagecraft 3cr

THTR 122 Costume Workshop 3cr

THTR 221 Basic Stage Lighting 3cr

*Performance Core:*

THTR 130 Stage Voice *or* THTR 131 Stage Movement 3cr

THTR 240 Acting I 3cr

THTR 350 Directing 3cr

**Production Practicum: (1)**

THTR 486 Practicum in Production 4cr

**Theater Concentration Electives:** concentrate in one or two of the following areas: 9cr

*Area A: Design/Tech* (in addition to any of the technical core beyond the 6cr required)

THTR 320 Scene Design 3cr

THTR 321 Stage Lighting Design 3cr

THTR 322 Costume Design 3cr

THTR 323 Sound Design 3cr

THTR 324 Advanced Stagecraft 3cr

THTR 489 Technical Theater Problems 3cr

*Area B: Performance* (in addition to any of the performance core beyond the 6cr required)

THTR 340 Acting II 3cr

THTR 341 Acting Styles 3cr

THTR 342 Acting Shakespeare 3cr

THTR 484 Directing Studio 3cr

THTR 487 Acting Studio 3cr

*Area C: Musical Theater (2)* 3cr

DANC 150 Fundamentals of Dance 3cr

DANC 250 Beginning Modern Dance 3cr

DANC 260 Beginning Jazz Dance 3cr

DANC 270 Beginning Ballroom and Tap Dance 3cr

DANC 280 Beginning Ballet 3cr

DANC 290 Ethnic Dance 3cr

DANC 485 Dance Studio 3cr

THTR 341 Acting Styles 3cr

THTR 487 Acting Studio 3cr

*Area D: Theater History and Theory (3)*

THTR 310 Theater Criticism 3cr

THTR 347 Playwriting 3cr

THTR 350 Directing 3cr

**Theater Electives:** 3cr

Choose an additional course either from any THTR course listed above or any of the following:

THTR 223, 281, 310, 345, 347, 481, 483, 493

**Free Electives:** 27

**Total Degree Requirements:** 120

- (1) 4cr over a minimum of six semesters including one semester for senior-year project.
- (2) In addition to auditioning for limited seats in applied voice lessons from the Music Department, students could choose at least one acting class and at least one dance class from the listings in this category.
- (3) In addition to taking all four of the Classic and Modern Theater courses for 6 of the 9cr required in this concentration, an additional 3cr can be chosen from the courses in this category (assuming that they are not already serving another major requirement) or from specially defined THTR 281/481/483 courses.

**Minor--Theater 15**

Students interested in a Theater Minor must meet with the department chairperson to work out an approved list of courses to serve the intended purpose of the Theater Minor.

### Dance Minor

The Dance Minor program provides a foundation for those interested in teaching dance, working in administration with a dance company, managing a private dance studio, working with theater productions, or desiring a broad-based education within the dance discipline.

The minor is an 18-credit program with 6 required and 12 advised elective credits. The required credits include pertinent foundation courses and advanced-level theory courses. The required courses also provide a comprehensive study of production elements, fundamental and historical theories of dance, and dance choreographic and teaching theories that cannot be obtained in any of the elective courses. The advised elective credits include the technique courses.

The Dance Minor is based on the National Standards for Arts Education dance requirements. Using this basis for the program ensures fundamental preparation for a number of students needs, e.g., the dance teacher, the performer, and the dance studio owner.

Through advisement, the minor program can serve the individual student's needs. The program would be of interest to majors in secondary and elementary education, small business, recreation and physical education, theater, music, and interdisciplinary fine arts and anyone who has an interest in dance and wants to broaden his or her Liberal Arts education.

**Minor--Dance 18**

**Required Courses:** 6

DANC 102 Introduction to Dance 3cr

One course from the following:

DANC 351 Choreography 3cr

DANC 353 Dance Curriculum and Instruction 3cr

DANC 355 Dance Production: Administration to Production 3cr

**Four courses from the following as advised:** 12

DANC 150 Fundamentals of Dance 3cr

DANC 250 Beginning Modern Dance 3cr

DANC 260 Beginning Jazz Dance 3cr

DANC 270 Beginning Ballroom and Tap Dance 3cr

DANC 280 Beginning Ballet 3cr

DANC 290 Ethnic Dance 3cr

DANC 485 Dance Studio 3cr

# The College of Health and Human Services

Mary E. Swinker, Interim Dean

Dolores Brzycki, Assistant Dean for Administration

Mary E. Williams, Director, Academic Planning and Assessment

Website: [www.iup.edu/healthhumanserv](http://www.iup.edu/healthhumanserv)

The College of Health and Human Services comprises nine multifaceted departments which offer programs leading to seventeen baccalaureate degrees and six master's degrees, five minors, two credit-bearing certificate programs, and two noncredit certificate program. The departments in the college are Criminology, Culinary Arts, Employment and Labor Relations, Food and Nutrition, Health and Physical Education, Hospitality Management, Human Development and Environmental Studies, Nursing and Allied Health Professions, and Safety Sciences.

The college offers degrees in areas relevant to workforce needs and prides itself on having established a learning-centered environment in which the curricula bridge theory and practice. Hands-on fieldwork, observations, clinical experiences, internships, cooperative education, and service-learning opportunities are regular components of the curricula and provide valuable learning experiences for students. Instructional methods are often cooperative and collaborative, affording students the opportunity to understand what they can contribute to and gain from collective efforts. Discovery-based instruction provides opportunities to learn about a discipline by practicing in the field. Media technology, an ever-expanding resource, provides access to worldwide information. Faculty members recognize the central role of the learner in the learning process and strive to create integrated, holistic learning environments. The focus on learning is a commitment to the continuous improvement of the quality of education offered by the college.

The mission of the College of Health and Human Services is to serve the public interest by preparing professionals for applied professional disciplines. Graduates will be compassionate, affirm high personal and professional standards, provide future leadership, and be committed to creating and advancing knowledge in their discipline.

## Pre-Law Interdisciplinary Minor

Successful lawyers possess excellent skills in writing and speaking and can analyze a problem and explain its solution in clear, logical terms. The Pre-Law Interdisciplinary Minor prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination. This minor may be taken with any major other than those with a Pre-Law Track. Although a pre-law minor is not required for law school admission, this interdisciplinary minor will provide students with the prerequisite skills for law school. Interested students should contact the Department of Finance and Legal Studies.

## Pre-Law Interdisciplinary Minor

21

Seven courses, including at least one from each of the seven areas (no courses with student's major prefix):

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 225

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Philosophy:* PHIL 101, 110, 222, 450

*Political Science:* PLSC 358, 359, 361

## College Majors

- **Athletic Training**
- **Child Development and Family Relations**
- **Clinical Laboratory Science**
- **Criminology** (Pre-law Track available)
- **Culinary Arts** (nondegree Certificate program)
- **Employment and Labor Relations** (graduate program only)
- **Family and Consumer Sciences Education**

- **Fashion Merchandising**
- **Health and Physical Education**
- **Hospitality Management**
- **Interior Design**
- **Nuclear Medicine Technology**
- **Nutrition** (Tracks available: Culinary Dietetics, Dietetics, Nutrition)
- **Nursing** (Tracks available: Licensed Practical Nurse, Registered Nurse)
- **Physical Education and Sport** (Programs available: Aquatic, Exercise Science, Sport Administration)
- **Respiratory Care** (Certified Respiratory Therapist Track available)
- **Safety Sciences**

## College Minors

- **Child Development and Family Relations**
- **Criminology**
- **Information Assurance**
- **Nutrition**
- **Pre-Law Interdisciplinary**
- **Safety Sciences**

## Credit Certificate Programs

- **Driver Education**
- **Gerontology**

## Department of Criminology

Website: [www.iup.edu/criminology](http://www.iup.edu/criminology)

**Randy L. Martin, Chairperson;** Austin, Bolden, Frenzel, Giever, Gossett, Hanrahan, Kim, Lee, Lewis, Mansley, J. Martin, Merlo, Mutchnick, Myers, Phaneuf, Roberts, Wasileski; and professors emeriti McCauley, Wilson

The Department of Criminology offers students seeking careers in criminology a broad liberal arts education that encourages them to think critically about crime and justice issues and also prepares them for careers in the criminal justice system. The degrees offered are the Bachelor of Arts with a major in Criminology and the Bachelor of Arts with a major in Criminology Pre-Law track. Additionally, students may minor in Criminology. Through the School of Graduate Studies and Research, the department also offers graduate work at both the master's and doctoral levels.

The program in Criminology has a fivefold objective:

1. The education of students for employment and leadership in the expanding field of criminology and criminal justice
2. The education of presently employed criminal justice personnel who recognize a need for furthering their education
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education
4. The instruction of students who wish to prepare for graduate study and/or research in criminology
5. A curriculum that provides an excellent foundation for students preparing for a career in law

Nearly every level of government offers opportunities for professional careers in criminology. For example, employment opportunities normally exist in more than fifty federal agencies (e.g., Federal Bureau of Investigation, U.S. Department of Treasury, Federal Bureau of Prisons). Graduates also will find employment in local and state organizations including law enforcement (e.g., Pennsylvania State Police, various municipal police departments) and correctional agencies (e.g., probation, parole, Pennsylvania Department of Corrections). Additionally, there are a wide variety of opportunities in the expanding fields of private, commercial, and industrial security, including cybersecurity. Furthermore, many governmental agencies

have specialized units dealing with juveniles, community relations, training, education, and research. Career opportunities also are available in research and teaching at the college and university levels and in research divisions of various agencies.

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### Bachelor of Arts–Criminology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 217

**Natural Science:** CHEM 111-112 or BIOL 103-104 recommended

**Social Science:** CRIM 101

**Liberal Studies Electives:** 6cr, no courses with CRIM prefix

**Major:** 33

**Required Courses:**

CRIM 102	Survey of Criminology	3cr
CRIM 306	Criminological Research Methods	3cr
CRIM 400	Theoretical Criminology	3cr
CRIM 401	Contemporary Issues in Criminology	3cr
CRIM 403	Dilemmas in Criminology and Criminal Justice	3cr

**Controlled Electives:**

Select two courses from each group:

*Group A: The Criminal Justice System* 6cr

CRIM 205	Policing and the Community
CRIM 215	Survey of Courts and the Criminal Justice System

CRIM 225	Survey of Corrections
CRIM 235	Survey of Juvenile Justice and Juvenile Law
CRIM 255	Law, Social Control, and Society

*Group B: Critical Issues in Criminology* 6cr

CRIM 344	Terrorism
CRIM 354	White Collar Crime
CRIM 374	Environmental Crime and Justice
CRIM 384	Violence and Victimology
CRIM 394	Crime and Delinquency Prevention

*Group C: Diversity Issues in Criminology* 6cr

CRIM 410	Race, Ethnicity, Social Structure, and Crime
CRIM 450	Women and Crime
CRIM 470	Comparative Study of Justice

**Minor/Concentration:** 15-21

**Free Electives:** 15-21

**Total Degree Requirements:** 120

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### Bachelor of Arts–Criminology/Pre-Law Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 217

**Natural Science:** CHEM 111-112 or BIOL 103-104 recommended

**Social Science:** CRIM 101

**Liberal Studies Electives:** 6cr, no courses with CRIM prefix

**Major:** 33

**Required Courses:**

CRIM 102	Survey of Criminology	3cr
CRIM 306	Criminological Research Methods	3cr
CRIM 400	Theoretical Criminology	3cr
CRIM 401	Contemporary Issues in Criminology	3cr
CRIM 403	Dilemmas in Criminology and Criminal Justice	3cr

**Controlled Electives:**

Select two courses from each group:

*Group A: The Criminal Justice System* 6cr

CRIM 205	Policing and the Community
CRIM 215	Survey of Courts and the Criminal Justice System

CRIM 225	Survey of Corrections
CRIM 235	Survey of Juvenile Justice and Juvenile Law
CRIM 255	Law, Social Control, and Society

*Group B: Critical Issues in Criminology* 6cr

CRIM 344	Terrorism
CRIM 354	White Collar Crime
CRIM 374	Environmental Crime and Justice
CRIM 384	Violence and Victimology
CRIM 394	Crime and Delinquency Prevention

*Group C: Diversity Issues in Criminology* 6cr

CRIM 410	Race, Ethnicity, Social Structure, and Crime
CRIM 450	Women and Crime
CRIM 470	Comparative Study of Justice

**Other Requirements: Pre-Law Interdisciplinary Track** 15-21

Seven courses, including at least one from each of six areas:

*Business:* ACCT 201, ACCT 202, BLAW 235

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Philosophy:* PHIL 101, 110, 222, 450

*Political Science:* PLSC 358, 359, 361

**Free Electives:** 15-21

**Total Degree Requirements:** 120

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### Minor–Criminology (1) 18

**Required Courses:**

CRIM 101	Crime and Justice Systems	3cr (2)
CRIM 102	Survey of Criminology	3cr
CRIM 401	Contemporary Issues in Criminology	3cr
CRIM 403	Dilemmas in Criminology and Criminal Justice	3cr

Two additional CRIM electives, one chosen from 6cr (3, 4)

Controlled Electives Group B and one from Group C

- (1) Must have formal Criminology Department approval to be admitted to minor in Criminology.
  - (2) Meets Liberal Studies Social Science requirement.
  - (3) For students in the Computer Science Information Assurance major, CRIM 321 may be substituted for Group B elective.
  - (4) For students in the Computer Science Information Assurance major, CRIM 323 may be substituted for Group C elective.
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### Minor–Information Assurance (1) 18

**Required Courses:**

COSC 110	Problem Solving and Structured Programming	3cr (2)
COSC 316	Host Computer Security	3cr
COSC 352	LAN Design and Installation	3cr
CRIM 101	Crime and Justice Systems (3) <i>or</i>	3cr
CRIM 102	Survey of Criminology (3)	
CRIM 321	Cybersecurity and Loss Prevention	3cr
CRIM 323	Cybersecurity and the Law	3cr

- (1) Computer Science majors in the Information Assurance Track are not eligible to take this minor; instead, they must take a Criminology minor.
  - (2) Computer Science majors cannot count COSC 110; instead, they must take one additional course from the following: CRIM 300, 355, 400, 401, 481, 482.
  - (3) Criminology majors cannot count CRIM 101 or 102; instead, they must take one additional course from the following: COSC 341, 356, 362, 427, 432, 482, IFMG 382.
- 

### Criminal Justice Training Center (CJTC)

The CJTC provides high-quality education and training programs for the continuing professionalism of the criminal justice system. The CJTC is one of only seventeen schools in the commonwealth certified to offer Act 120 training, a 750-hour program that qualifies graduates to be municipal police officers. The police academy is located at the main campus at IUP and various satellite locations. The center also offers programs for in-service personnel in fulfillment of annual mandatory continuing education require-

ments and nonmandatory courses such as Basic and Advanced Accident Investigation, Perceptual Driving, and Instructor Development. Lethal Weapons Training, Act 235, provides the basic requirements and mandatory recertification for armed security personnel. Visit the website [www.iup.edu/crimjustice](http://www.iup.edu/crimjustice) for more information.

## Department of Culinary Arts

**Website:** [www.iup.edu/culinary](http://www.iup.edu/culinary)

**Albert S. Wutsch, Chairperson;** Battaglia, DeMane, Fitting, Kapusta, Klinger, Nutter, Pike, Rupert, Wygonik; professor emeritus Brown

The Department of Culinary Arts offers a four-semester (sixteen calendar months), competency-based, noncredit certificate Culinary Program. This distinctive program provides hands-on learning experiences, including fundamental culinary theory and on-the-job work experience, giving each student the necessary skills and knowledge to begin a successful career in the field of culinary arts.

The department also offers a Culinary Arts and Baking and Pastry Arts Program for the students with a desire to excel in pastry arts. Students admitted to the combination Culinary Arts/Baking and Pastry Program are on the culinary campus for five semesters: fall, spring, and summer of the first year and fall and spring of the second year. The final summer semester is a paid externship in the industry.

The Culinary Arts and Baking and Pastry Arts programs are nationally recognized and accredited by the American Culinary Federation.

During the last semester of study, students are placed with a distinguished employer in a prestigious resort or restaurant for a paid externship experience. This contemporary approach to learning enables students to achieve advanced levels of proficiency in both culinary techniques and business management skills while they advance through the certificate programs.

Graduates of the culinary programs may transfer 42 credits of coursework toward a Bachelor of Science degree with a major in Hospitality Management and 32 credits toward a Bachelor of Science degree with a major in Nutrition. In addition to these programs, a European Study option is also available.

## Department of Employment and Labor Relations

**Website:** [www.iup.edu/elr](http://www.iup.edu/elr)

**David M. Piper, Chairperson;** Decker, Korn; and professors emeriti Byers, McPherson, Morand

The Department of Employment and Labor Relations offers a graduate program within the College of Health and Human Services leading to the degree of Master of Arts in Employment and Labor Relations. The 36-credit program consists of a required core of 21 credits, including an elective thesis and elective course offerings totaling 15 credits. Internships are available and strongly encouraged.

The program is multidisciplinary, combining analytical and human relations skills with knowledge drawn from social sciences and business disciplines. The degree is designed to prepare professional employment and labor relations practitioners in public and private management, unions, neutral agencies, government agencies, and arbitration panels.

While the department does not offer coursework leading to an undergraduate major or degree, it does offer several undergraduate courses which are open to students of any major or college.

## Department of Food and Nutrition

**Website:** [www.iup.edu/foodnutrition](http://www.iup.edu/foodnutrition)

**Susan S. Dahlheimer, Chairperson;** Johnson, Taylor-Davis, Wagoner; and professors emeritae Cessna, Minnick, Steiner

The Department of Food and Nutrition offers a degree program in nutrition with two tracks, dietetics and general nutrition. Within the degree program, students select a natural science option determined by their academic preparation and career goals. This curriculum prepares students as professionals for a diversity of career opportunities in food service, the food industry, food and nutrition research, and health care.

In addition, the department provides Liberal Studies courses which are available to all university students. These include FDNT 143, an option in the university's Liberal Studies requirements for Health and Wellness; FDNT 145, a Liberal Studies elective; and three LBST 499 synthesis courses (Food and Culture, The Battle for Perfection, and Screen Cuisine).

## Dietetics Track

Students who complete the Dietetics Track (Didactic Program in Dietetics) meet the academic requirements as accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. This track will prepare an individual to serve as a translator of food and nutrition science information for members of the larger community with respect to healthful food preparation, healthy eating behaviors, medical nutrition therapy, management of nutrition delivery and food service systems, and advocacy for the profession of dietetics. The individual who completes this program will exhibit an in-depth knowledge of food, nutrition, behavioral sciences, and management theory and be able to apply this knowledge to solve problems.

## Nutrition Track

The Nutrition Track allows students to plan a curriculum based upon career goals other than becoming a registered dietitian. Career opportunities for these students include public health, food service administration, culinary arts, journalism, communications, business, and gerontology.

Students who wish to pursue a career in food and nutrition research should select the Natural Science Option II plus the nutrition track to acquire a foundation for theoretical and applied food science and nutrition. This option meets the needs of students who wish to enter careers in food/nutrition which require a graduate education.

## Culinary Dietetics Track

The Culinary Dietetics Track allows students to combine academic preparation in nutrition with extensive hand-on learning experiences in culinary arts by one of two routes:

1. Students who have completed a minimum of 28 credits toward the baccalaureate degree have the opportunity to enroll in the Culinary Arts program at the Punxsutawney regional campus, where the three-semester program (fall, spring, summer) will transfer into the Department of Food and Nutrition 32 credits, which apply to the Bachelor of Science degree. Students complete the culinary arts externship in the summer between the junior and senior years.
2. Students who earn a culinary certificate prior to admission to the dietetics program will receive 32 credits toward the degree.

This track uniquely prepares graduates to incorporate healthy nutrition into classical cuisine, manage food service operations focused on nutrition needs, and integrate culinary arts into hospital, extended care, and school food service operations. Graduates qualify for admission to CADE-accredited Dietetic Internships in pursuit of Dietetic Registration.

## Nutrition Minor

This minor is recommended for students majoring in related disciplines, such as nursing and allied health, pre-medical, pre-pharmacy, food service management, health and physical education, child development, and family and consumer sciences, and for students who have a personal, consumer-oriented interest in nutrition. Science prerequisites for the minor are CHEM 101/102 or BIOL 103/104.

## Bachelor of Science–Nutrition/Dietetics Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:

**Health and Wellness:** HPED 143

**Mathematics:** MATH 217

**Natural Science:** CHEM 101-102 or 111-112 (1)

**Social Science:** ECON 101 or 121, PSYC 101, SOC 151

**Liberal Studies Electives:** 3cr, no courses with FDNT prefix

48



<b>Major:</b>		25
<b>Required Courses:</b>		
FDNT 110	Careers in Food and Nutrition	1cr
FDNT 150	Foods	3cr
FDNT 151	Foods Laboratory	1cr
FDNT 212	Nutrition	3cr
FDNT 213	Life Cycle Nutrition	3cr
FDNT 355	Medical Nutrition Therapy I	3cr
FDNT 362	Experimental Foods	3cr
FDNT 458	Advanced Human Nutrition	4cr
FDNT 470	Human Food Consumption Patterns	3cr
FDNT 484	Senior Seminar	1cr
<b>Controlled Electives:</b>		28
<b>Dietetics Track:</b>		
FDNT 364	Methods of Teaching Food and Nutrition	3cr
FDNT 402	Community Nutrition	3cr
FDNT 430	Professional Topics in Food and Nutrition	3cr
FDNT 455	Medical Nutrition Therapy II	3cr
FDNT 463	Nutrition Counseling	3cr
HRIM 256	Human Resources in the Hospitality Industry	3cr
HRIM 259	Hospitality Purchasing	3cr
HRIM 313	Food Production and Service	4cr
MGMT 310	Principles of Management	3cr
<b>Other Requirements:</b>		13
<b>Natural Science Sequence:</b>		
BIOL 105, 155, 241, CHEM 255		13cr
<b>Free Electives:</b>		6
<b>Total Degree Requirements:</b>		120
(1) CHEM 231 is also required if CHEM 111-112 is taken.		

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### Bachelor of Science–Nutrition/Nutrition Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications:		48
<b>Health and Wellness:</b> HPED 143		
<b>Mathematics:</b> MATH 217		
<b>Natural Science:</b> CHEM 101-102 or 111-112 (1)		
<b>Social Science:</b> ECON 101 or 121, PSYC 101, SOC 151		
<b>Liberal Studies Electives:</b> (2) 3cr, no courses with FDNT prefix		
<b>Major:</b>		25
<b>Required Courses:</b>		
FDNT 110	Careers in Food and Nutrition	1cr
FDNT 150	Foods	3cr
FDNT 151	Foods Laboratory	1cr
FDNT 212	Nutrition	3cr
FDNT 213	Life Cycle Nutrition	3cr
FDNT 355	Medical Nutrition Therapy I	3cr
FDNT 362	Experimental Foods	3cr
FDNT 458	Advanced Human Nutrition	4cr
FDNT 470	Human Food Consumption Patterns	3cr
FDNT 484	Senior Seminar	1cr
<b>Controlled Electives:</b>		10-28
<b>Nutrition Track (non-DPD):</b>		
FDNT electives (300 level and above, internship of 3cr strongly recommended)		6cr
Program minor, certificate, second major, or core concentration required for program completion (3)		4-22cr
<b>Other Requirements:</b>		13
<b>Natural Science Sequence:</b>		
BIOL 105, 155, 241, CHEM 255		13cr
<b>Free Electives:</b>		6-24
<b>Total Degree Requirements:</b>		120
(1) CHEM 231 is also required if CHEM 111-112 is taken.		

- (2) For the Gerontology Certificate, PHIL 405 or 400 or PSYC 378 can be applied as a Liberal Studies Elective. For the Business Administration minor, ECON 122 can be applied as a Liberal Studies Elective.
- (3) Select one of the following:
- Minor in Biology, Business Administration, Chemistry, Communications Media, Educational Technology, Journalism, Psychology, or Psychology Science
  - Certificate in Culinary Arts or Gerontology
  - Core concentration in Hospitality Management (FDNT 150, 151, HRIM 101, 256, 259, 265, 313, 402, HRIM 3cr elective) or Physical Education and Sport (HPED 319, 410, 411, 492, and HPED 343 or 375 or 412)

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### Bachelor of Science–Nutrition/Culinary Dietetics Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications:		45
<b>Health and Wellness:</b> HPED, NURS, or FDNT 143		
<b>Mathematics:</b> MATH 217		
<b>Natural Science:</b> CHEM 101-102		
<b>Social Science:</b> ANTH 470 or PLSC 101 or 111, PSYC 101, SOC 151		
<b>Liberal Studies Electives:</b> 0cr (1)		
<b>Major:</b>		30
<b>Required Courses: (2)</b>		
FDNT 110	Careers in Food and Nutrition	1cr
FDNT 213	Life Cycle Nutrition	3cr
FDNT 355	Medical Nutrition Therapy I	3cr
FDNT 362	Experimental Foods	3cr
FDNT 364	Methods of Teaching Food and Nutrition	3cr
FDNT 402	Community Nutrition	3cr
FDNT 430	Professional Topics	3cr
FDNT 455	Medical Nutrition Therapy II	3cr
FDNT 458	Advanced Human Nutrition	4cr
FDNT 463	Nutrition Counseling	3cr
FDNT 484	Senior Seminar	1cr
<b>Other Requirements:</b>		45
Certificate in Culinary Arts (1, 3)		32cr
Natural Science Sequence: BIOL 241 or 270, 105, 155, CHEM 255		13cr
<b>Free Electives:</b> (4)		0
<b>Total Degree Requirements:</b>		120
(1) The culinary certificate includes a course in computer science (previously transferred as COSC 101), which is considered an additional 3cr toward Liberal Studies requirements, resulting in a total of 48cr in Liberal Studies.		
(2) Students who complete their culinary certificate prior to completing CHEM 101 and 102 are also required to take FDNT 212.		
(3) Completion of a culinary certificate is required for this degree.		
(4) Because the culinary certificate includes considerable additional preparation in foods, the 32cr include numerous hours of work that can be considered free electives.		

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### Minor–Nutrition

<b>Required Courses:</b>		7
FDNT 151	Foods Laboratory	1cr
FDNT 212	Nutrition	3cr
FDNT 213	Life Cycle Nutrition	3cr
<b>Controlled Electives:</b>		9-10
Select at least one course from the following:		3-6cr
FDNT 150	Foods	3cr
FDNT 470	Human Food Consumption Patterns	3cr

Select two courses from the following to be approved by the department chair:	3-7cr
FDNT 245 Sports Nutrition	3cr
FDNT 355 Medical Nutrition Therapy I	3cr
FDNT 362 Experimental Foods	3cr
FDNT 402 Community Nutrition	3cr
FDNT 455 Medical Nutrition Therapy II	3cr
FDNT 458 Advanced Human Nutrition	4cr

## Department of Health and Physical Education

**Website:** [www.iup.edu/healthphysed](http://www.iup.edu/healthphysed)

**Elaine H. Blair, Chairperson;** Ronald L. Trenney, Assistant Chairperson; Alman, Bayles, Black, Deuschlander, Hsiao, Kostelnik, Kulik, Lorenzi, McKee, Racchini, Rivera, Sloniger, Smith; and professors emeriti Aierstock, Beck, Blacksmith, Clark, Dakak, Davis, Dickie, Eltz, Godlasky, Grove, Hornfeck, Mill, Montgomery, Moore, Neal, Sledzik, Sloniger, Sutton, Tucker

The Department of Health and Physical Education provides the following services:

1. instruction in health and wellness courses as part of the university's Liberal Studies requirement
2. instruction in health and physical education courses as Physical Education course electives
3. an undergraduate program in health and physical education that leads to the Bachelor of Science in Education degree with potential certification to teach in the Commonwealth of Pennsylvania
4. Bachelor of Science degree in Physical Education and Sport which includes programs in Aquatics, Exercise Science, and Sport Administration
5. Bachelor of Science degree in Athletic Training
6. Certification program in Driver Education

### Required Program—Liberal Studies

The department, through its Health and Wellness course in the Liberal Studies program, seeks to enhance the overall well-being of students through instruction planned to promote and maintain desirable levels of physical, mental, emotional, and social well-being. Self-responsibility in the following dimensions of wellness is emphasized: nutritional awareness, stress awareness and management, exercise and fitness, substance use and abuse, and sexually transmitted diseases/AIDS. The importance of reducing risk factors for chronic degenerative disease and managing lifestyle factors for promotion of health is presented with implication for both the present and future. Information is provided during class lectures and enhanced by a variety of practical learning experiences which give students opportunities for self-assessment and personal application of the subject matter.

In addition, the department offers a variety of 1-credit activity courses focusing on physical fitness and the development of skills essential for recreation and lifetime sports. Instruction is offered in many activities including golf, resistive exercise, scuba, swimming, and tennis.

The university's Liberal Studies requirements require that each student successfully complete HPED 143 or its alternates, FDNT 143 or NURS 143. Students may also elect to take 4 credits of the ROTC program (MLSC 101-102) as an alternate to the wellness courses. Activity courses will continue to be offered, although they are no longer required. It is encouraged and recommended that students choose these courses as elective credits.

### Bachelor of Science Degree—Physical Education and Sport

The Bachelor of Science degree with a major in Physical Education and Sport provides greater emphasis on sport science subject matter/content and less on pedagogy. Students who select this degree program generally apply their knowledge in the areas of exercise science, community and corporate fitness, cardiac rehabilitation, sport industry management, and/or executive fitness programming. The physical education and sport degree program is a non-teacher certification program. Students pursuing this degree may be required to purchase a personal liability insurance policy and obtain certain clearances before beginning the preprofessional experience, the internship, or any other field experience on or off campus.

Three specialty programs of study have been developed for the degree program in Physical Education and Sport. These programs, in addition to the Nutrition minor within the Physical Education and Sport program, and a business minor in conjunction with the Sport Administration program, provide students with an innovative, relevant, and challenging curriculum and at the same time encourage the promotion of interdisciplinary work. Course content is focused toward specific professions, as well as toward different national credentialing possibilities. Student internships and preprofessional experiences can be more appropriately focused to enhance opportunities for postgraduate employment. Furthermore, these programs provide emphasis in specific subject content areas and teach skills necessary for students to assume leadership roles in careers related to the health fitness industry as well as the sport science industry.

### Aquatics

This program of study is designed to provide students with the knowledge and skills necessary to assume leadership roles, both instructional and administrative, in a variety of professional settings. These opportunities include school districts, both for-profit and nonprofit community organizations, and aquatic coaching.

### Exercise Science

IUP's Exercise Science program is accredited by the Commission on Accreditation of Allied Health Education Programs according to standards established by the Committee on Accreditation for the Exercise Sciences. This program provides students with the knowledge, skills, and abilities to seek employment in private and commercial fitness clubs, medical fitness facilities, sport-specific and conditioning facilities, and clinical settings such as cardiac and pulmonary rehabilitation programs. This program has an academic core, specialty classes in exercise assessment, programming, and prescription, and opportunities for work site experience.

While students may select Exercise Science as one of several tracks in the Health and Physical Education Department, students must demonstrate above-average academic performance by maintaining programmatic standards including: (1) minimum 2.5 cumulative GPA for transfer students outside and within IUP; (2) a minimum of a "C" grade in major/core Exercise Science classes, including: HPED 285, 286, 319, 343, 347, 375, 410, 411, 414, 492, and 493; (3) prior to graduation, successful completion of an NCCA (National Commission for Certifying Agencies) approved health and fitness certification. Student transcripts will be reviewed each semester by the individual academic advisor and reported to the Exercise Science Program coordinator for compliance with the academic requirements. Specific work site experiences may be contingent upon students' obtaining student liability insurance and selected health clearances such as physical, TB, and drug screening.

### Sport Administration

This program prepares students to use a variety of skills to function in a management capacity within the sport industry. Graduates of this program can seek employment in such areas as school and college athletic departments, coaching, community recreation organizations, minor and major league sports franchises, commercial sport facilities, and golf courses, as well as other athletic and sports-related industries. Students acquire management skills that can be used in multiple career tracks. Successful completion of this program of study will also earn the student a Minor in Business from IUP's Eberly College of Business and Information Technology.

### Bachelor of Science Degree—Athletic Training

IUP's Athletic Training program is accredited by the Commission on Accreditation of Athletic Training Education. This program prepares students with the knowledge, skills, and experience to provide prevention, evaluation, acute management, and rehabilitation and/or reconditioning services to professional and amateur athletes and other individuals involved in sports, exercise, and physical activity in general. The program has an academic and a clinical education and experience component. The clinical education and experience component entails a series of eight sequential laboratory courses and a minimum of four semesters of supervised field experience with the IUP Department of Athletics and affiliated clinical settings (sports medicine clinics, physicians' offices/hospitals, and high schools). Students must file an application for admission into the program

during their fourth semester at IUP (spring of their sophomore year). Formal admission into the program is a prerequisite for assignment to clinical field experiences and enrollment in upper-level courses.

Admission into the program is competitive, and fulfillment of the minimum eligibility requirements does not guarantee admission. Each year, the program will select a predetermined number of students from the eligible candidate pool based on demonstrated academic achievement and the evaluation of other criteria (letters of recommendation, essay, etc.). The Athletic Training Selection Committee will review all completed applications and rank students according to the specified criteria. The number of candidates admitted each year may vary with the quality of the candidate pool, available clinical experience sites, and available supervision. Students not admitted initially may reapply the following year. The minimum standards for eligibility are: (1) sophomore status (minimum of 48 credits), (2) a minimum 2.7 cumulative GPA, (3) a minimum of a "C" grade in HPED 175, 221, 345, and 346, (4) two letters of recommendation, (5) satisfactory completion of a one-semester directed clinical observation, (6) a written essay, and (7) a completed and signed "technical standards" form. Official admission and subsequent assignment to field experiences are also contingent upon obtaining student liability insurance, health clearances (physical, TB, speech, and hearing), and Acts 34, 151, and 114 clearances (state and federal criminal and child abuse records). Once admitted, students must continue to demonstrate above-average academic and clinical performance in order to remain in good standing (specific program retention and completion guidelines apply). Students should obtain an Athletic Training Program overview or admissions packet from the department for full details.

### Bachelor of Science in Education Degree—Health and Physical Education

The Health and Physical Education program is accredited by the National Council for Accreditation of Teacher Education in both Health Education (with accreditation criteria defined by the American Association for Health Education) and Physical Education (with accreditation criteria defined by the National Association for Sport and Physical Education).

Requirements for the degree of Bachelor of Science in Education with a major in Health and Physical Education include the university's Liberal Studies requirements, Professional Education requirements, and the Health and Physical Education core requirements. Upon completion of the degree program and successfully passing the Praxis Exam, the student is qualified for an Instructional I Certificate in Health and Physical Education, issued by the Pennsylvania Department of Education in Harrisburg. This certificate is valid for teaching health and physical education in grades K-12 for three years in the public schools of Pennsylvania. All students seeking Pennsylvania certification must follow the 3-Step Process described in the section "Admission to Teacher Education and Certification" found in the College of Education and Educational Technology section of this catalog.

### Health and Physical Education Core

The Health and Physical Education curriculum identifies a required core of studies which emphasizes a body of knowledge relevant to the study of professional health and physical education, as well as the study of physical education and sport. Courses contained in the core are those which are intended to enable students to identify and solve problems by applying relevant knowledge and also to engage in self-directed learning.

Candidates for degree programs in Health and Physical Education must demonstrate acceptable cognitive and psychomotor qualifications as well as desirable character and personality traits. The professional programs seek to foster those qualities of individual character and competence that are inherent in personal and professional maturity. Specific competencies and curriculum requirements are defined within each degree-specific program, and student progress is supervised by the academic advisor.

### Driver Education

Candidates for the driver education certification must possess, or be a candidate for, a valid Pennsylvania certificate in any area of certification. A student must currently complete the following four courses: HPED 251, 252, 353, and 354. Students must request the certificate in driver education when they apply for graduation. For students who have already graduated,

contact the Office of the Dean, College of Education and Educational Technology, for correct procedures.

### Bachelor of Science—Physical Education and Sport (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217

**Natural Science:** BIOL 103-104, CHEM 101-102, or SCI 105-106

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 3cr, FDNT 145, no courses with HPED prefix

#### Major:

**Core Requirements:** 23

HPED 142	Foundations of Health, Physical Education, and Sport	3cr
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr
HPED 209	Motor Behavior	3cr
HPED 221	Human Structure and Function	3cr
HPED 341	Evaluation in Health and Physical Education	3cr
HPED 343	Physiology of Exercise	3cr
HPED 441	Psychosocial Implications for Health and Physical Education	3cr
HPED 442	Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr

**Professional Requirements:** 24

HPED 230	Aerobic Fitness	2cr
HPED 263	Aquatics <i>or</i>	1cr
HPED 261	Water Safety Instructor	
HPED 315	Biomechanics	3cr
HPED 319	Preprofessional Experience II	3cr
HPED 344	Adapted Physical Activity and Sport	3cr
HPED 375	Physiological Basis of Strength Training	3cr
HPED 410	Exercise Prescription	3cr
HPED 411	Physical Fitness Appraisal	3cr
HPED 412	Physical Activity and Stress Management	3cr

**Controlled Electives:** (1) 12

Select 12cr from the following: BIOL 151, 155, 12cr  
HPED 335, 413, 492, PHYS 151, 161, SAFE 347

**Free Electives:** 13

**Total Degree Requirements:** 120

(\*) Admission to this program is by permission of advisor only.

(1) Nutrition minor may substitute for Controlled Electives; see Department of Food and Nutrition.

### Bachelor of Science—Physical Education and Sport—Exercise Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 101, 217

**Natural Science:** BIOL 103-104, CHEM 101-102, or SCI 105-106

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 3cr, FDNT 145, no courses with HPED prefix

**Major:** 23

#### Core Requirements:

HPED 142	Foundations of Health, Physical Education, and Sport	3cr
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr
HPED 209	Motor Behavior	3cr
HPED 221	Human Structure and Function	3cr
HPED 341	Evaluation in Health and Physical Education	3cr
HPED 343	Physiology of Exercise	3cr
HPED 441	Psychosocial Implications for Health and Physical Education	3cr

HPED 442	Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr	
<b>Exercise Science Requirements:</b>			
BIOL 151	Human Physiology	4cr	46
HPED 261	Water Safety Instructor <i>or</i>	1cr	
HPED 263	Aquatics		
HPED 285	Group/Individual Exercise Leadership	3cr	
HPED 286	Strength/Personal Training Practicum	2cr	
HPED 315	Biomechanics	3cr	
HPED 319	Preprofessional Experience II	3cr	
HPED 344	Adapted Physical Activity and Sport	3cr	
HPED 347	Physiology of Exercise Laboratory	1cr	
HPED 375	Physiological Basis of Strength Training	3cr	
HPED 410	Exercise Prescription	3cr	
HPED 411	Physical Fitness Appraisal	3cr	
HPED 412	Physical Activity and Stress Management	3cr	
HPED 413	Physical Activity and Aging	3cr	
HPED 414	Exercise Electrocardiography	2cr	
HPED 492	Health Fitness Instruction	3cr	
HPED 493	Internship	3cr	
PHYS 151	Medical Physics Lecture	3cr	

**Free Electives:** 0  
**Total Degree Requirements:** 120

### Bachelor of Science—Physical Education and Sport—Sport Administration

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51  
**Mathematics:** MATH 217  
**Natural Science:** BIOL 103-104, CHEM 101-102, or SCI 105-106  
**Social Science:** ECON 121, PSYC 101  
**Liberal Studies Electives:** 6cr, BTED/COSC/IFMG 101, ECON 122, no course with HPED prefix

**Major:** 23

**Core Requirements:**

HPED 142	Foundations of Health, Physical Education, and Sport	3cr	
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr	
HPED 209	Motor Behavior	3cr	
HPED 221	Human Structure and Function	3cr	
HPED 341	Evaluation in Health and Physical Education	3cr	
HPED 343	Physiology of Exercise	3cr	
HPED 441	Psychosocial Implications for Health and Physical Education	3cr	
HPED 442	Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr	

**Sport Administration Requirements:** 25

HPED 280	Aquatic Facilities Management	2cr	
HPED 292	Introduction to Sport Management	3cr	
HPED 319	Preprofessional Experience II	3cr	
HPED 320	Managing Facilities and Events in Sports	3cr	
HPED 344	Adapted Physical Activity and Sport	3cr	
HPED 445	Business Practices in Sport	3cr	
HPED 460	Law and Issues in Managing Sport	2cr	
HPED 493	Internship	3cr	

Select one course from the following:  
ECON 239, HPED 315, 335, 375, 412, 430

**Business Minor Requirements:** 21

ACCT 201	Accounting Principles I	3cr	
ACCT 202	Accounting Principles II	3cr	
BLAW 235	Legal Environment of Business	3cr	
BTST 321	Business and Interpersonal Communications	3cr	
FIN 310	Fundamentals of Finance	3cr	
MGMT 310	Principles of Management	3cr	

MKTG 320	Principles of Marketing	3cr	
<b>Total Degree Requirements:</b>			120

### Bachelor of Science—Physical Education and Sport—Aquatics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54

**Mathematics:** MATH 217

**Natural Science:** BIOL 103-104, CHEM 101-102, or SCI 105-106

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, FDNT 145, no course with HPED prefix

**Major:** 23

**Core Requirements:**

HPED 142	Foundations of Health, Physical Education, and Sport	3cr	
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr	
HPED 209	Motor Behavior	3cr	
HPED 221	Human Structure and Function	3cr	
HPED 341	Evaluation in Health and Physical Education	3cr	
HPED 343	Physiology of Exercise	3cr	
HPED 441	Psychosocial Implications for Health and Physical Education	3cr	
HPED 442	Senior Seminar: Professional Development in Health, Physical Education and Sport	3cr	

**Sport Science Requirements:** 22

HPED 263	Aquatics	1cr	
HPED 315	Biomechanics	3cr	
HPED 319	Preprofessional Experience II	3cr	
HPED 344	Adapted Physical Activity and Sport	3cr	
HPED 375	Physiological Basis of Strength Training	3cr	
HPED 410	Exercise Prescription	3cr	
HPED 411	Physical Fitness Appraisal	3cr	
HPED 412	Physical Activity and Stress Management	3cr	

**Aquatics Requirements:** 12

HPED 165	Lifeguarding	1cr	
HPED 261	Water Safety Instructor	1cr	
HPED 264	Advanced Aquatics	1cr	
HPED 270	Instructor of Handicapped Swimming	1cr	
HPED 276	Coaching of Swimming	1cr	
HPED 279	Swimming Pool Maintenance and Chemistry	2cr	
HPED 280	Aquatic Facilities Management	2cr	
HPED 335	Athletic Coaching	3cr	

**Free Electives:** 9

**Total Degree Requirements:** 120

### Bachelor of Science—Athletic Training

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 217

**Natural Science:** BIOL 103-104 or CHEM 101-102

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 6cr, BTED/COSC/IFMG 101, FDNT 145, no course with HPED prefix

**Major:** 23

**Core Requirements:**

HPED 142	Foundations of Health, Physical Education, and Sport	3cr	
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr	
HPED 209	Motor Behavior	3cr	
HPED 221	Human Structure and Function	3cr	
HPED 341	Evaluation in Health and Physical Education	3cr	

HPED 343	Physiology of Exercise	3cr	
HPED 441	Psychosocial Implications for Health and Physical Education	3cr	
HPED 442	Senior Seminar: Professional Development in Health, Physical Education and Sport	3cr	
<b>Athletic Training Requirements:</b>			
BIOL 151	Human Physiology	4cr	46
HPED 315	Biomechanics	3cr	
HPED 344	Adapted Physical Activity and Sport	3cr	
HPED 345	Athletic Training	3cr	
HPED 346	Athletic Training Lab	1cr	
HPED 365	Advanced Athletic Training	4cr	
HPED 375	Physiological Basis of Strength Training	3cr	
HPED 376	Athletic Training Clinical Practicum I	1cr	
HPED 377	Athletic Training Clinical Practicum II	1cr	
HPED 380	Seminar in Sports Medicine	2cr	
HPED 385	General Medical Conditions in Athletic Training	2cr	
HPED 411	Physical Fitness Appraisal	3cr	
HPED 446	Therapeutic Modalities	4cr	
HPED 448	Therapeutic Exercise for Athletic Injury Management	4cr	
HPED 476	Athletic Training Clinical Practicum III	1cr	
HPED 477	Athletic Training Clinical Practicum IV	1cr	
PHYS 151	Medical Physics Lecture	3cr	
<b>Controlled Electives:</b> one course from the following:			
FDNT 245, HPED 410, 492, SAFE 347		3cr	

**Total Degree Requirements:** 120

**Note:** The HPED office or the office of the Athletic Training Curriculum Coordinator can provide additional information related to specific requirements regarding initial health screening, criminal record checks, and liability insurance needs.

### Bachelor of Science in Education–Health and Physical Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217 and 3 additional cr (must be approved as Liberal Studies Mathematics courses)

**Natural Science:** BIOL 103-104 or CHEM 101-102

**Social Science:** PSYC 101

**Liberal Studies Electives:** 0cr

**Major:** (1)

**Required Courses:** 26

HPED 142	Foundations of Health, Physical Education, and Sport	3cr	
HPED 175	Prevention and Care of Injuries to the Physically Active	2cr	
HPED 209	Motor Behavior	3cr	
HPED 221	Human Structure and Function	3cr	
HPED 315	Biomechanics	3cr	
HPED 341	Evaluation in Health and Physical Education	3cr	
HPED 343	Physiology of Exercise	3cr	
HPED 441	Psychosocial Implications for Health and Physical Education	3cr	
HPED 442	Senior Seminar: Professional Development in Health, Physical Education and Sport	3cr	

**Professional Requirements:**

**Health and Physical Education:** 25

HPED 214	Teaching Health Fitness and Gymnastics	1cr	
HPED 215	Teaching Rhythmic Activities and Dance	1cr	
HPED 216	Teaching Elementary Physical Education	2cr	
HPED 217	Teaching Middle School Physical Education	2cr	
HPED 218	Teaching Secondary Physical Education	2cr	
HPED 316	Teaching Elementary Health Education	2cr	

HPED 318	Preprofessional Experience I	1cr	
HPED 325	School and Community Health	3cr	
HPED 330	Assessment in Physical Education	1cr	
HPED 349	Applied Pediatric Exercise Lab	1cr	
HPED 370	Adapted Health and Physical Education	3cr	
HPED 426	Health Science Instruction	3cr	
HPED 450	Curriculum and Programming in Sexuality Education	3cr	

**College:**

**Preprofessional Education Requirements:** 23

COMM 103	Digital Instructional Technology	3cr	
EDSP 102	Educational Psychology	3cr	
EDEX 323	Instruction of English Language Learners with Special Needs	2cr	

**Professional Education Requirements:**

EDUC 242	Pre-Student Teaching Clinical Experience I	1cr	
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr	
EDUC 421	Student Teaching	6cr	
EDUC 441	Student Teaching	6cr	
EDUC 442	School Law	1cr	

**(#) Total Degree Requirements:** 122

**(\*)** See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.

**(1)** Students are required to obtain and keep CPR Instructor Certification and Water Safety Instructor Certification current prior to student teaching and through graduation or verify completion of course.

**(#)** See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation.

### Certification–Driver Education

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Certification in Driver Education may be added to a valid Pennsylvania Instructional Certificate with the completion of the following:

HPED 251	Foundations of Safety and Emergency Health Care (1)	3cr	
HPED 252	Introduction to the Driving Task	3cr	
HPED 353	Driving Education Program Management	3cr	
HPED 354	Application of Driver Education Instructional Modes	3cr	

**(1)** HPED 251 may be substituted for HPED 242 in the core curriculum.

### Highway Safety Center

IUP’s Highway Safety Center attempts to address the highway safety needs of the commonwealth through a variety of programs and activities. The Highway Safety Center programs encompass activity in five major areas: 1) research, surveys, and studies, 2) education (teaching), 3) training and conferences, 4) field and extension services, and 5) traffic safety communications and information exchange.

### Teacher Certification in Driver Education

Through cooperative effort with the Department of Health and Physical Education, the Highway Safety Center coordinates and directs IUP’s Teacher Certification Program in Driver Education.

### IUP Regional Highway Safety Project

This project is a federally funded program contracted with the Pennsylvania Department of Transportation’s Center for Highway Safety. Originating at IUP in January 1987, under the title of the Indiana County Seat Belt Program, its purpose was to increase public awareness and the usage of occupant restraints. The program expanded its emphasis and territory in 1989 and now includes the counties of Armstrong, Jefferson, and Clearfield. Programs for corporations, schools, civic groups, law enforcement agencies, etc., include topics such as occupant safety, bicycle safety, pedestrian safety, safe driving characteristics, and DUI. The project also serves as a resource to other community safety groups by providing printed materials, audiovi-

sual aids, crash-car dummy costumes, and the “Seat Belt Convincer.” A Car Seat Loaner Program provides car seats to Indiana County residents.

### Driver Training Programs

From basic driver education programs for beginning drivers to truck driver training to advanced driver training programs in emergency driving techniques, the Highway Safety Center provides a cadre of courses, all designed to meet the needs of the student.

### Emergency Services Training

This program area is designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue.

### Traffic Accident Investigation

Traffic Accident Investigation programs are available for safety directors, insurance adjusters, and police personnel. Courses range from basic investigation up to and including accident reconstruction.

## Department of Hospitality Management

**Website:** [www.iup.edu/hospitality-mgt](http://www.iup.edu/hospitality-mgt)

**Tom VanDyke, Chairperson;** Miller, Shiring, Sullivan, Wang; and professors emeriti Simkins, Woods

The Department of Hospitality Management is one of the premier hospitality management programs in the Commonwealth of Pennsylvania. The second largest hospitality management program in the commonwealth, it is regionally known and nationally respected. It offers students an academic preparation leading to a Bachelor of Science degree.

The mission of the Department of Hospitality Management program is to develop competent hospitality management professionals who meet or exceed contemporary industry needs while preparing them for future career growth and achievement.

The dynamic, flexible curriculum prepares students for professional careers in the hospitality management industry. Graduates of the program have specialized knowledge and skills for managing the business of hotels, resorts, restaurants, clubs, theme parks, contract food services, school food service, business and industry, cruise lines, special events, convention and trade show events, and wedding consultation and in areas of the travel and tourism industry. The program is accredited by the Accreditation Commission for Programs in Hospitality Administration.

### Bachelor of Science–Hospitality Management

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Health and Wellness:** FDNT 143

**Mathematics:** MATH 101 or higher

**Natural Science:** Option I

**Social Science:** ECON 101, PSYC 101

**Liberal Studies Electives:** 3cr, no course with HRIM prefix

#### Major:

**Required Courses:** 44

HRIM 101	Introduction to the Hospitality Industry	3cr
HRIM 130	Hospitality Sanitation and Security	3cr
HRIM 150	Principles of Hospitality Management	3cr
HRIM 256	Human Resources in the Hospitality Industry	3cr
HRIM 259	Hospitality Purchasing	3cr
HRIM 265	Hospitality Cost Management	3cr
HRIM 310	Professional Development in the Hospitality Industry	2cr
HRIM 313	Food Production and Service	4cr
HRIM 320	Hospitality Marketing	3cr
HRIM 330	Applications of Food Production and Service	4cr
HRIM 335	Legal Issues in Hospitality	3cr
HRIM 413	Advanced Food Production and Service	4cr
HRIM 470	Hospitality Business Model	3cr
HRIM 493	Internship	3cr (1)

**Controlled Electives:** One track required: 16  
16cr of nonrequired HRIM prefix courses

**Other Requirements:** 9-11

ACCT 201 Accounting Principles I 3cr

FNLG XXX Foreign Languages 6-8cr

**Free Electives:** (2) 1-3

**Total Degree Requirements:** 120

- (1) Each student must complete 800 hours of work experience, of which 400 hours must be through supervised experiences in HRIM 493. See department internship coordinator for detailed information.
- (2) State System Board of Governors’ policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 or above.

## Department of Human Development and Environmental Studies

**Website:** [www.iup.edu/hdes](http://www.iup.edu/hdes)

**Fredalene B. Bowers, Chairperson;** Blood, Brown, Gordon, Henry, Hwang, McCombie, Ramassini, Su, Swinker; and professors emeriti Cramer, Gallati, Heckroth, Hovis, Hwang, Kazmer, Kesner, A. Nelson, L. Nelson, Streifthau, Viggiano, Wood

The Department of Human Development and Environmental Studies was created by the merging of the Family and Consumer Sciences Education and Consumer Services departments. The mission statement of the department is to empower individuals to support human and environmental needs, enabling them to perform professionally in a changing, diverse technological and global society.

The department is composed of majors that are interdisciplinary and share humanistic values. All majors have an applied research focus and stress critical thinking, professional judgment, decision making, and synthesis of information with direct focus upon career paths.

The department offers academic programs leading to the Bachelor of Science degree with the following majors: Child Development and Family Relations, Fashion Merchandising, and Interior Design. The Family and Consumer Sciences Education program leads to a Bachelor of Science in Education. These majors prepare men and women for positions in business, the community, and education. The majors also prepare students for graduate study in the areas of interior design, housing, clothing, textiles, consumer economics, human service, child development, family studies, or education.

Faculty advisors work closely with students in planning and integrating the academic program to meet the students’ career goals and to supplement classroom experiences. Internships are available and encouraged so students can apply academic knowledge to actual situations. International study is also available to provide an enriching cultural experience.

### Fashion Merchandising

The Fashion Merchandising program provides course emphasis in clothing and human behavior, apparel production and analysis, textiles and quality control, apparel distribution, merchandising and promotion, global diversity, historic textiles and apparel, color and aesthetics, and apparel construction. Communications, problem solving, group project organization, professional presentation, and analytical and critical thinking skills are incorporated in course content. The Eberly College of Business and Information Technology complements the Fashion Merchandising major by providing study in one of three options: Business Administration, Marketing, and Small Business Management.

A cooperative program between IUP and the Fashion Institute of Technology in New York City allows students to study one of seven majors: accessories design, advertising and communications, advertising design, fashion design, manufacturing management, textile/surface design, and textile development and marketing.

Graduates of this program are being prepared for entry-level positions such as manufacturer’s sales representative, production assistant, ready-to-wear quality control analyst, textile testing laboratory technician, management

trainee leading to position of store manager, executive/merchandising trainee leading toward position of buyer/merchandise manager, museum curator assistant, personal color consultant, and personalized shopping specialist for an upscale retail firm.

### Bachelor of Science–Fashion Merchandising

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54

**Mathematics:** MATH 101 or higher level MATH course

**Natural Science:** CHEM 101-102 or SCI 105-106

**Social Science:** ECON 121, PSYC 101, GEOG 104 or ANTH 110 or ANTH 211

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, ECON 122, MATH 214 or 217, no course with FSMR prefix

**Major:** 36

**Required Courses:**

FSMR 110	Introduction to Fashion	3cr
FSMR 112	Fundamentals of Clothing Construction	3cr
FSMR 314	Textiles	3cr
FSMR 350	Apparel Industry I	3cr
FSMR 360	Apparel Industry II	3cr
FSMR 385	Ready-to-Wear Analysis	3cr
FSMR 434	Quality Control in Textiles	3cr
FSMR 456	Historic Costume	3cr
FSMR 480	Seminar in Fashion Merchandising	3cr

**Controlled Electives:** Three courses from the following: 9cr

FSMR 212, 252, 281, 303, 356, 357, 433, 453, 454, FSMR 455, 481, 482, INDS 205

**Additional Requirements:** 21-24

**Required Courses:**

ACCT 201	Accounting Principles I	3cr
JRNL 120	Journalistic Writing <i>or</i>	
	ENGL 310 Public Speaking	3cr
MKTG 320	Principles of Marketing	3cr

**Complete courses in one of the following options:** 12-15cr

*Option 1: Business Administration Minor (15cr)*

ACCT 202, FIN 310, MGMT 310, select two courses from BTST 321, BLAW 235, IFMG 300 (Note: students must meet all minor requirements listed in catalog)

*Option 2: Marketing (12cr)*

MKTG 321, select three 3cr 400-level MKTG courses

*Option 3: Small Business Management (12cr)*

MGMT 275, 325 (1), select two courses from MGMT 300, 310, 350, 403 (2)

**Free Electives:** 6-9

**Total Degree Requirements:** 120

- (1) Prerequisites to be waived.
- (2) Student will need to take ACCT 202 and 300.

### Interior Design

The Interior Design program enables graduates to analyze problems, synthesize information, and implement design solutions supportive of the needs of people and the environment. The program emphasizes synthesizing of information and creative problem solving based on interdisciplinary experiences and communicating solutions. The program enables graduates to adapt to a changing world by drawing on history and multidisciplinary experience and applying principles of research. This program is accredited by the National Association of Schools of Art and Design.

The core of the program includes courses addressing space planning, drafting, design graphics, color theory, building systems, materials and finishes, human factors, computer-aided drafting and design, design development, textiles, lighting, residential and contract design, and professional practice. Detailed information is available from instructors regarding equipment and supplies to be purchased by students for individual courses in this program. Internships present an excellent opportunity for students to gain practical,

on-the-job training and are highly recommended. Experiential learning opportunities in the community augment the program. Students tour a variety of settings including offices, museums, factories, showrooms, retail outlets, and construction sites. Supportive courses are offered in art and business. Graduates are prepared for entry-level positions in commercial and residential design, sales, historic preservation, and showroom management.

### Bachelor of Science–Interior Design

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Fine Arts:** fulfilled by ARHI 205

**Humanities:** PHIL 223 recommended

**Mathematics:** MATH 101 or higher

**Natural Science:** SCI 105-106

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 6cr, ARHI 207, ECON 122, no courses with INDS prefix

**Major:** 51

**Required Courses:**

FSMR 314	Textiles	3cr
INDS 105	Introduction to Interior Design	3cr
INDS 118	Drafting for Construction I	3cr
INDS 205	Color Theory and Application	3cr
INDS 218	Drafting for Construction II	3cr
INDS 230	Presentation for Interior Design	3cr
INDS 240	Three-Dimensional Design for Interior Design	3cr
INDS 305	Interior Lighting	3cr
INDS 310	Human Factors in Interior Design	3cr
INDS 313	Materials and Finishes	3cr
INDS 315	Residential Design I	3cr
INDS 319	Residential Design II: Kitchen, Bath, Media Room Design	3cr
INDS 370	Development of Design I	3cr
INDS 380	Development of Design II	3cr
INDS 405	Interior Design Professional Practice	3cr
INDS 464	Contract Design I	3cr
INDS 465	Contract Design II	3cr

**Other Requirements:** 15

**Outside Concentration:**

*Business:* BTST 105, MKTG 320 6cr

*Art:* ART 114; two courses from the following:

ART 213, 214, 215, 216, 218, 219 9cr

**Free Electives:** 3

**Total Degree Requirements:** 120

### Family and Consumer Sciences Education

The K-12 Family and Consumer Sciences Education major prepares students for the teaching of family and consumer sciences-related subjects in the public schools. Coursework is required in all areas of family and consumer services, including child development and family relations, consumer economics, clothing, foods, and interior design. Professional education courses also are required.

### Bachelor of Science in Education–K-12 Family and Consumer Sciences Education (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 151

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 6cr, CNSV 315, MATH 152, no courses with FCSE prefix

<b>College:</b>	34
<b>Preprofessional Education Sequence:</b>	
COMM 103 Digital Instructional Technology	3cr
EDSP 102 Educational Psychology	3cr
<b>Professional Education Sequence:</b>	
EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323 Instruction of English Language to Special Needs Learners	2cr
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242 Pre-Student Teaching Clinical Experience I	1cr
EDUC 342 Pre-Student Teaching Clinical Experience II	1cr
EDUC 441 Student Teaching	12cr
EDUC 442 School Law	1cr
FCSE 350 Teaching Family Life Education	3cr
FCSE 450 Teaching Vocational and Family Consumer Science Education	3cr
<b>Major:</b>	
<b>Required Courses:</b>	34
CDFR 218 Child Development	3cr
CDFR 224 Marriage and Family Relations	3cr
CDFR 321 Preschool Education: Developmentally Appropriate Practices	3cr
CNSV 101 Personal and Family Management	3cr
FDNT 150 Foods	3cr
FDNT 151 Foods Laboratory	1cr
FDNT 212 Nutrition	3cr
FSMR 112 Fundamentals of Clothing Construction	3cr
FSMR 314 Textiles	3cr
INDS 312 Housing and Culture	3cr
<b>Controlled Electives:</b>	
Two courses from the following: FSMR 110, 252, 434, CDFR 323, 325, 427, 429, 463, FDNT 213, 245, HRIM 130, 313 (1), HPED 450, INDS 105, 205	6cr
<b>Free Electives:</b>	1
(#) <b>Total Degree Requirements:</b>	120
(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.	
(1) Must take the prerequisite HRIM 130.	
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.	

### Child Development and Family Relations Major

The Child Development and Family Relations (CDFR) program leads to a Bachelor of Science degree. Primary objectives of the program are to prepare professionals to work in a variety of programs with children, youth, and families; to work in or supervise programs that entail all aspects of child development, early care and education, and family relations; to teach at the adult level; or work in or supervise human service agencies at federal, state, or local levels. The program also provides preparation for students who want to pursue graduate study in child development, family studies, and/or related areas.

IUP students who major or minor in CDFR must earn a "C" or better in all CDFR courses and CDFR prerequisites to graduate from the CDFR program within the department. Students who earn a "D" in a required course will be permitted to retake the course concurrently with a higher-level course with permission of the CDFR faculty.

The CDFR minor, consisting of 18 credits, is for students who desire to work in programs that entail all aspects of child development and family relationships and administration in human service agencies at federal, state, and local levels but who have their major coursework in a related field. The CDFR minor is appropriate for all majors who wish to pursue careers working with children and families. The minor includes two required courses

and any combination of four additional courses, including at least one 400-level course, with a CDFR prefix from the list provided.

### Bachelor of Science—Child Development and Family Relations

**Liberal Studies:** As outlined in Liberal Studies section 51 with the following specifications:

**Mathematics:** 3cr

**Social Science:** ANTH 110 or any nonwestern social science course, PSYC 101, SOC 151

**Liberal Studies Electives:** 6cr, CNSV 315 and FDNT 145, no courses with CDFR prefix

**Major:** 43

**Required Courses:**

CDFR 218	Child Development	3cr
CDFR 224	Marriage and Family Relations	3cr
CDFR 310	Childhood Observation and Assessment	3cr
CDFR 315	Introduction to Early Intervention	3cr
CDFR 321	Preschool Education: Play and Developmentally Appropriate Practices	3cr
CDFR 322	Early Care and Education	3cr
CDFR 323	Family Issues	3cr
CDFR 410	Infant and Toddler Development	3cr
CDFR 411	Family and Community	3cr
CDFR 425	Adolescence: Risk and Resiliency	3cr
CDFR 426	Techniques of Parent Education	3cr
CDFR 427	Administration of Child Development Centers	3cr
CDFR 428	Family Dynamics	3cr
CDFR 429	Teaching in Child Development Centers	4cr

**Other Requirements:** 3-4

**Outside Courses:**

NURS 202	Foundations of Child Health <i>or</i>	3cr
BIOL 155	Human Physiology and Anatomy	4cr

**Free Electives:** (1) 22-23

**Total Degree Requirements:** 120

(1) Students are encouraged to declare a minor, complete an internship, or fulfill the requirements for NCFR's Certification for Family Life Educators.

### Minor—Child Development and Family Relations 18

**Required Courses:**

CDFR 218	Child Development	3cr
CDFR 224	Marriage and Family Relations	3cr
Select four of the following courses (at least one must be at the 400 level), meeting prerequisites:		
CDFR 310	Childhood Observation and Assessment	3cr
CDFR 315	Introduction to Early Intervention	3cr
CDFR 321	Preschool Education: Play and Developmentally Appropriate Practices	3cr
CDFR 322	Early Care and Education	3cr
CDFR 323	Family Issues	3cr
CDFR 411	Family and Community	3cr
CDFR 425	Adolescence: Risk and Resiliency	3cr
CDFR 426	Techniques of Parent Education	3cr
CDFR 427	Administration of Child Development Centers	3cr



## Department of Nursing and Allied Health Professions

**Website:** [www.iup.edu/rn-alliedhealth](http://www.iup.edu/rn-alliedhealth)

**Elizabeth A. Palmer, Chairperson;** Beck, Calderone, Chunta, Gerwick, Greenawalt, Gropelli, Holmes, Labant, Mortimer, Poorman, Rossiter, Shanty, Shellenbarger, West, Williams, Zidek, Zuraikat; and professors emeritae Blair, Kresak, Kuzneski, Murray, Smatlak, Snyder, Thistlethwaite, Twal

The College of Health and Human Services offers a curriculum leading to the Bachelor of Science degree with a major in Nursing. Students are admitted to the nursing major as freshmen. Transfer students and those with a previous degree may also be admitted. Upon completion of the program, the graduate is prepared to write the examination for licensure as a Registered Nurse in Pennsylvania and all other states. The program is accredited by the Commission on Collegiate Nursing Education.

The nursing curriculum has as its primary goal the development of professional nurse generalists who are liberally educated, clinically competent, and aware of their social responsibilities as health professionals. The program is designed to provide a broad background in liberal education, coupled with the specialized knowledge and skills required for professional nursing practice. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health care team, and to utilize scientific principles in planning, implementing, and evaluating health care. The nursing curriculum emphasizes concepts in primary, secondary, and tertiary prevention of health problems.

The first two semesters are devoted mainly to Liberal Studies and science courses considered essential to the nursing major. Throughout the last six semesters, clinical experiences in patient care are provided in acute and long-term care facilities as well as community settings.

The Bachelor of Science degree with a major in Nursing is offered for registered nurses who are graduates of accredited diploma or associate degree nursing programs and who have met IUP's admission requirements. The track for registered nurses awards advanced standing based on prior work completed in a nursing program. Registered nurse students will fulfill all degree requirements set by the university. The track is designed to prepare the professional nurse to function as a provider, designer, manager, and coordinator of care in a variety of health care settings.

The Bachelor of Science degree with a major in Nursing is offered for licensed practical nurses who are graduates of accredited, approved practical nursing programs and who have met IUP's admission requirements. The track for licensed practical nurses provides an alternative curriculum accounting for prior work completed in a practical nursing program. Licensed Practical Nurse students will fulfill all degree requirements set by the university. The track is designed to prepare the practical nurse to function as a provider, designer, manager, and coordinator of care in a variety of health care settings.

Detailed information is available in the department office regarding requirements such as health screening, liability insurance, legal clearance, transportation, and professional uniforms.

Change of major applications and criteria are available in the Nursing Department Office. A change of major is granted based on meeting the criteria and seat availability.

### Bachelor of Science–Nursing

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217 (1)

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 3cr, PSYC 310, no courses with NURS prefix

**Major:** 52-55

#### Required Courses:

NURS 211	Nursing Practice I	1cr
NURS 212	Professional Nursing I	2cr
NURS 213	Nursing Practice II	1cr
NURS 214	Health Assessment	2cr
NURS 236	Foundations of Nursing	3cr
NURS 312	Professional Nursing II	2cr
NURS 316	Research Utilization in Nursing	3cr
NURS 330	Care of the Child	2cr
NURS 331	Care of the Child Clinical	2.5cr
NURS 332	Maternal-Neonatal Health	2cr
NURS 333	Maternal-Neonatal Health Clinical	2.5cr
NURS 336	Adult Health I	4cr
NURS 337	Adult Health Clinical I	5cr
NURS 412	Professional Nursing III	2cr
NURS 431	Community Health Clinical	2.5cr
NURS 432	Psychiatric/Mental Health	2cr
NURS 433	Psychiatric/Mental Health Clinical	2.5cr
NURS 434	Community Health	2cr
NURS 436	Adult Health II	4cr
NURS 437	Adult Health Clinical II	5cr
NURS 450	A Cognitive Approach to Clinical Problem Solving (2)	3cr

#### Other Requirements:

16

#### Science Sequence:

BIOL 105	Cell Biology	3cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr
FDNT 212	Nutrition	3cr

#### Free Electives:

1-4

#### (#) Total Degree Requirements:

120

- (1) The Pennsylvania State Board of Nursing requires two units of high school mathematics (one of which is algebra) for admission to the nursing major.
  - (2) Students who achieve a higher score than a specified minimum on a department-required standard test(s) are exempt from NURS 450. These students would need 4cr of Free Electives.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

### Bachelor of Science–Nursing/Registered Nurse Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Health and Wellness:** fulfilled by the major

**Mathematics:** MATH 217

**Liberal Studies Electives:** 3cr, no course with NURS prefix

#### Major:

59

#### Required Courses:

NURS 316	Research Utilization in Nursing	3cr
NURS 334	Transitions in Professional Nursing	3cr
NURS 411	Advanced Health Assessment	3cr
NURS 412	Professional Nursing III	2cr
NURS 434	Community Health	2cr
NURS 454	Health Promotion of Families Across the Lifespan	3cr
NURS 455	Introduction to Nursing Informatics	3cr
NURS 467	Leadership Practicum	2cr
NURS 469	Community Health Practicum	2cr
NURS 480	Seminar in Nursing	3cr
NURS XXX	Electives	3cr
NURS	Credits via articulation	30cr

#### Free Electives: (1)

13

**Total Degree Requirements:** 120

(1) 3cr must have non-nursing prefix.

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### Bachelor of Science–Nursing/Licensed Practical Nurse Track (1)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Health and Wellness:** fulfilled by the major

**Mathematics:** MATH 217

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 7cr, PSYC 310, LIBR 251, no course with NURS prefix

**Major:** 51

**Required Courses:**

NURS 214	Health Assessment	2cr
NURS 312	Professional Nursing II	2cr
NURS 316	Research Utilization in Nursing	3cr
NURS 334	Transitions in Professional Nursing	3cr
NURS 412	Professional Nursing III	2cr
NURS 431	Community Health Clinical	2.5cr
NURS 432	Psychiatric/Mental Health	2cr
NURS 433	Psychiatric/Mental Health Clinical	2.5cr
NURS 434	Community Health	2cr
NURS 436	Adult Health II	4cr
NURS 437	Adult Health Clinical II	5cr
NURS 450	A Cognitive Approach to Clinical Problem Solving (2)	3cr
NURS 336	Adult Health I <i>and</i>	4cr
NURS 337	Adult Health Clinical I	5cr

**OR**

	Credits by Exam <i>and</i>	8cr (3)
NURS 493	Internship	1cr
NURS 330	Care of the Child	2cr
NURS 331	Care of the Child Clinical	2.5cr
NURS 332	Maternal-Neonatal Health	2cr
NURS 333	Maternal-Neonatal Health Clinical	2.5cr

**OR**

	Credits by Exam <i>and</i>	8cr (3)
NURS 493	Internship	1cr

**Other Requirements:** 16

BIOL 105	Cell Biology	3cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr
FDNT 212	Nutrition	3cr

**Free Electives:** 4-7

**Total Degree Requirements:** 120

- (1) The Pennsylvania State Board of Nursing requires four units of English, three units of social studies, two units of math (one of which is algebra), and two units of science in high school for admission to the nursing major.
- (2) Students who achieve a higher score than a specified minimum on a department-required standardized test(s) are exempt from NURS 450.
- (3) Students have the option of earning up to 16cr via examination. Exam results must be received before students register for any 300- or 400-level nursing courses other than NURS 334.

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## Allied Health Professions Programs

Joyce A. Shanty, Coordinator

### Respiratory Care

The Bachelor of Science degree with a major in respiratory care prepares the graduate for a career as a registered respiratory care practitioner. Respiratory care practitioners evaluate, treat, and care for people with breathing problems. They assist physicians in the evaluation and treatment of heart and lung disorders. Respiratory care practitioners are experts in the therapeutic use of medical gases, oxygen administration, pulmonary resuscitation, and artificial airways. They are employed in hospitals, extended care facilities, clinics, rehabilitation centers, physicians' offices, private companies providing home care services, and municipal organizations.

IUP and the Western Pennsylvania Hospital in Pittsburgh jointly offer this program. The program is accredited by the Commission on Accreditation for Respiratory Care. The program consists of two academic years of pre-clinical studies (61 credits) on the main campus at IUP and two academic years (59 credits) of clinical study at the Western Pennsylvania Hospital School of Respiratory Care, Pittsburgh. Students are expected to earn a GPA of at least 2.25 in the required natural sciences and mathematics courses and an overall GPA of at least 2.0 to be considered for admission into the clinical years in respiratory care. However, since admission to the clinical years is competitive, IUP cannot guarantee admission. Upon graduation, graduates are eligible for certification (CRT) and registration (RRT) in respiratory care. The granting of the degree is not contingent upon passing the examinations. Graduates are prepared for graduate degrees that may lead to careers in administration, education, and medicine.

The Bachelor of Science degree with a major in respiratory care is offered for Certified Respiratory Therapists (CRT) who are graduates of an accredited certificate or associate degree respiratory care program. CRT students will be awarded advanced standing (33 credits) based on prior academic work completed in a respiratory care program. Students fulfill degree requirements set by the university. This track is designed to prepare the certified respiratory therapist (CRT) to function in an advanced practice role.

Detailed information is available in the department office regarding requirements, such as health screening, liability insurance, legal clearance, and professional uniforms.

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### Bachelor of Science–Respiratory Care

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 105 or higher level

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151, non-Western course

**Synthesis:** not required

**Writing Intensive:** not required

**Liberal Studies Electives:** 6cr, PHYS 151, no courses with RESP prefix

**Major:** 59

**Required Courses:**

RESP 101	The Profession of Respiratory Care	1cr
RESP 326	Respiratory Care Clinical Practice I	3cr
RESP 327	Pharmacology	3cr
RESP 328	Introduction to Respiratory Care	4cr
RESP 329	Respiratory Care Equipment	4cr
RESP 330	Cardiopulmonary Resuscitation	2cr
RESP 333	Respiratory Care Clinical Practice II	3cr
RESP 334	Respiratory Care Instrumentation and Application	4cr
RESP 335	Patient Care Skills	3cr
RESP 336	Cardiopulmonary Evaluation and Clinical Correlation	4cr
RESP 337	Introduction to Pulmonary Function Studies	1cr
RESP 425	Clinical Case Studies	3cr
RESP 426	Respiratory Care Clinical Practice III	4cr
RESP 428	Essentials of Electrocardiology	2cr

RESP 429	Design and Function of a Respiratory Care Program	2cr
RESP 430	Pulmonary Function Studies	3cr
RESP 431	Pediatric Respiratory Care	1cr
RESP 433	Respiratory Care Clinical Practice IV	4cr
RESP 434	Neonatal Respiratory Care	3cr
RESP 436	Respiratory Care Teaching	2cr
RESP 437	Methods in Critical Care	2cr
RESP 438	Cardiopulmonary Rehabilitation	1cr

**Other Requirements:** 13

**Science Courses:**

BIOL 105	Cell Biology	3cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr

**Total Degree Requirements:** (1) 120

- (1) RESP 300- and 400-level courses are completed at Western Pennsylvania Hospital School of Respiratory Care in Pittsburgh.

### Bachelor of Science—Respiratory Care/Certified Respiratory Therapist Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** 3cr

**Synthesis:** not required

**Writing Intensive:** not required

**Liberal Studies Electives:** 6cr, no courses with RESP prefix

**Major:** 60

RESP credits via articulation (1)		33cr
<b>Required Courses:</b> (2)		27cr
RESP 425	Clinical Case Studies	3cr
RESP 426	Respiratory Care Clinical Practice III	4cr
RESP 428	Essentials of Electrocardiology	2cr
RESP 429	Design and Function of a Respiratory Care Program	2cr
RESP 430	Pulmonary Function Studies	3cr
RESP 431	Pediatric Respiratory Care	1cr
RESP 433	Respiratory Care Clinical Practice IV	4cr
RESP 434	Neonatal Respiratory Care	3cr
RESP 436	Respiratory Care Teaching	2cr
RESP 437	Methods in Critical Care	2cr
RESP 438	Cardiopulmonary Rehabilitation	1cr

**Free Electives:** 12

**Total Degree Requirements:** 120

- (1) Students in the CRT track are exempt from the 100- and 300-level courses in the Respiratory Care major and will receive 33cr via articulation.
- (2) RESP 400-level courses are completed at Western Pennsylvania Hospital School of Respiratory Care in Pittsburgh.

### Clinical Laboratory Science

Clinical Laboratory Science encompasses the study of analytical and diagnostic procedures used in clinical laboratories and in medical research. Clinical Laboratory Scientists (also known as Medical Technologists) perform a variety of laboratory tests upon which the physician depends for accurate diagnosis, prognosis, and proper treatment of the patient. The program of studies, presented jointly by IUP and accredited clinical laboratory science programs in hospitals, prepares the student to enter the profession. Upon completion of the four-year program, the Bachelor of Science degree with a major in Clinical Laboratory Science is granted. The program also prepares the student for graduate and professional schools.

IUP maintains affiliations with accredited schools of Clinical Laboratory Science/Medical Technology. To be competitive for clinical placement the

student must have a minimum overall GPA and Math/Science GPA of 2.5. Since admission to any hospital program is on a competitive basis, IUP cannot guarantee admission.

The following programs maintain agreements of affiliation with IUP: Altoona Regional Health System, Altoona; Children's Hospital Medical Center, Akron, Ohio; Memorial Medical Center, Johnstown; Lancaster General College of Nursing and Health Sciences, Lancaster; The Reading Hospital and Medical Center, Reading; St. Christopher's Hospital for Children, North Philadelphia; St. Vincent Health Center, Erie; Williamsport Hospital and Medical Center, Williamsport; WCA Hospital, Jamestown, N.Y.; and York Hospital, York.

Completion of academic studies at IUP and of one year of clinical experience qualifies the student to take a national certification examination. Successful results on this examination lead to certification as a professionally qualified medical technologist/clinical laboratory scientist.

### Bachelor of Science—Clinical Laboratory Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217

**Natural Science:** CHEM 111-112

**Synthesis:** not required

**Writing Intensive:** one required

**Liberal Studies Electives:** 6cr, PHYS 111, no courses with MEDT prefix

**Major:** 32

**Required Courses:** (1)

MEDT 494	Clinical Microbiology	8cr
MEDT 495	Clinical Chemistry	10cr
MEDT 496	Clinical Hematology/Coagulation	6cr
MEDT 497	Clinical Immunohematology	4cr
MEDT 498	Clinical Immunology/Serology	2cr
MEDT 499	Clinical Seminar	2cr

**Other Requirements:** 38

BIOL 111	Principles of Biology I	4cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 250	Principles of Microbiology	3cr
BIOL 364	Immunology	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 323	Analytical Methods	4cr
CHEM 351	Biochemistry	4cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

**Free Electives:** 2

**(#) Total Degree Requirements:** 120

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

- (1) These courses are offered by affiliating, hospital-based Schools of Clinical Laboratory Science (also known as Medical Technology). Areas of study are consistent with requirements of the National Accrediting Agency for Clinical Laboratory Sciences and are completed during the final twelve months of the degree program at an affiliating school.

### Nuclear Medicine Technology

Nuclear Medicine Technology is a medical specialty in which allied health care professionals, under the direction of a nuclear medicine physician, use radioactive materials in the diagnosis and treatment of disease. They are responsible for patient education and preparation regarding the nuclear medicine procedures, administration of radiopharmaceuticals, performing complex computer imaging studies, and radiation safety procedures for both patients and staff. The nuclear medicine technologist's skills complement those of the nuclear medicine physician.

The College of Health and Human Services offers a curriculum leading to the Bachelor of Science degree with a major in Nuclear Medicine Technology. Students are admitted to the major as freshmen. Transfer students and those with a previous degree may also be admitted. The program of study consists of three years of preclinical study on the IUP main campus and one year of clinical study at either the Nuclear Medicine Institute (NMI) at the University of Findlay, Findlay, Ohio, or the Nuclear Medicine Technology program at the Community College of Allegheny County (CCAC). The programs at NMI and CCAC are fully accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). Graduates of the program are eligible to take the Nuclear Medicine Technology national certificate examination offered by the Nuclear Medicine Technology Certification Board and the American Registry of Radiologic Technologists (ARRT). The granting of the degree is not contingent upon passing the examinations.

Students must meet specific academic requirements to be considered for admission to the NMI or to the CCAC Nuclear Medicine Technology program. Admission is competitive; IUP cannot guarantee admission into either of these facilities. Information regarding academic requirements and other special requirements for the clinical year is available in the department's office.

### Bachelor of Science—Nuclear Medicine Technology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 105

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101, MATH 217, PHYS 111, no courses with NMDT prefix

**Major:** 32

**Required Courses: (1)**

NMDT 427	Nuclear Scintigraphy	3cr
NMDT 428	Radiation Physics	3cr
NMDT 429	Nuclear Medicine Instrumentation	3cr
NMDT 430	Radiation Biology and Radiation Protection	2cr
NMDT 431	In Vivo/In Vitro Non-Imaging	1cr
NMDT 432	Radiopharmaceuticals	3cr
NMDT 433	Introduction to Tomographic Imaging	1cr
NMDT 434	Clinical Nuclear Medicine	16cr

**Other Requirements: (2)** 18

BIOL 105	Cell Biology	3cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
ENGL 310	Public Speaking	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

**Free Electives: (3)** 19

**Total Degree Requirements:** 120

- (1) These courses are offered at the University of Findlay/Nuclear Medicine Institute, Findlay, Ohio, and/or Community College of Allegheny County Nuclear Medicine Technology program, Pittsburgh. These areas of study are consistent with requirements of the JRCNMT. All eight of these areas of study are completed during the final twelve months of the degree program.
- (2) Students are also required to complete a medical terminology course/program. Options to fulfill this requirement must be approved by the coordinator of Allied Health Professions.
- (3) Two writing-intensive courses are required. Both courses may be from either Liberal Studies or Free Electives.

### Gerontology Certificate Program

**Joyce A. Shanty, Coordinator**

The Gerontology Certificate program provides an interdisciplinary approach to the systematic study of the aging and is designed to be combined with any undergraduate major at IUP. The 21-credit program entails three core courses, three elective courses, and an internship that provides experiential learning in an agency or program serving older adults. Many courses fulfill the requirements for the Liberal Studies program. Applications are available at 244 Johnson Hall. For information, call 724-357-7647.

**Gerontology Certificate Program** 21

**Core Courses:** 9

HPED 350	Health Aspects of Aging	3cr
PSYC 312	Adult Development and Aging	3cr
SOC 357	Sociology of Aging	3cr

**Controlled Electives:** 9

Select 9cr from the following: 9cr

ANTH 340, 444, CDFR 428, CNSV 315, GERN 281, 481, GERN 482, HPED 413, MGMT 300, 311, PHIL 400, 405, PSYC 376, 378, RHAB 312, SAFE 380, SOC 336, 342, 345

**Other Requirements:** 3

Internship (GERN 493 or internship in student's major) 3cr

### Department of Safety Sciences

**Website:** [www.iup.edu/safetysciences](http://www.iup.edu/safetysciences)

**Lon H. Ferguson, Chairperson;** Cekada, Engler, Janicak, Rhodes, Wachter; and professors emeriti McClay, Pacalo, Soule

The department offers a minor and a Bachelor of Science degree with a major in Safety Sciences with a focus on occupational safety and health. The program in Safety Sciences prepares the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains a need in Pennsylvania and the nation for university-educated occupational safety and health professionals. The curriculum includes a major of 45 credits in Safety Sciences and an additional 9 credits in related professional courses. A variety of elective courses is available in both the major and professional fields that enable students to strengthen their primary interest areas.

### Bachelor of Science—Safety Sciences

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 105

**Natural Science:** CHEM 101-102

**Social Science:** PSYC 101, SOC 151, non-western culture required

**Liberal Studies Electives:** 3cr, MATH 217, no courses with SAFE prefix

**Major:** 45

**Required Courses:**

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Safety I—General Industry	3cr
SAFE 211	Principles of Safety II—Construction Industry	4cr
SAFE 212	Hazard Prevention Management I	3cr
SAFE 220	Hazardous Materials	3cr
SAFE 311	Fire Protection	3cr
SAFE 330	Recognition, Evaluation, and Control of Occupational Health Hazards I	4cr
SAFE 345	Systems Safety Analysis	3cr
SAFE 347	Ergonomics	3cr
SAFE 410	Environmental Safety and Health Regulations	3cr
SAFE 412	Hazard Prevention Management II	3cr
SAFE 430	Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr
SAFE 488/493	Internship	6cr

<b>Other Requirements:</b>		21
<b>Additional Science and Mathematics:</b>		
BIOL 155	Human Physiology and Anatomy	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 112	Physics II Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 122	Physics II Lab	1cr
<b>Professional Courses:</b>		
ACCT 200	Foundations of Accounting	3cr
BTST 321	Business and Interpersonal Communications	3cr
MGMT 311	Human Behavior in Organizations	3cr
<b>Free Electives:</b>		6
<b>Total Degree Requirements:</b>		120

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The minor in Safety Sciences consists of 18 credits in Safety Sciences courses as identified below. The minor has improved job opportunities for students in Environmental Health, Environmental Geoscience, Criminology, Human Resource Management, International Business, and Management.

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<b>Minor–Safety Sciences</b>	<b>18</b>
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**Required Courses:**

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Safety I–General Industry	3cr
SAFE 220	Hazardous Materials	3cr

**Controlled Electives:**

Three SAFE courses approved by department chair	9cr
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# The College of Humanities and Social Sciences

Yaw A. Asamoah, Dean

Michele A. Norwood, Associate Dean

Chauna J. Craig, Dean's Associate

Website: [www.iup.edu/humanities](http://www.iup.edu/humanities)

The College of Humanities and Social Sciences provides a liberal education as an essential foundation for the student's preparation for a satisfying career. The college maintains an emphasis on the fundamental understanding of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in students critical and objective thinking, analytical skills, and a keen awareness of their responsibilities to society.

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## College Majors

Anthropology	Philosophy
Asian Studies	Political Science
Economics	Regional Planning
English	Religious Studies
English Education	Social Science Education
Geography	Social Studies Education
History	Sociology
International Studies/ Political Science	Spanish
Journalism	Spanish Education K-12
	Spanish for International Trade

## College Minors

Anthropology	Philosophy
Asian Studies	Political Science
Economics	Pre-Law Interdisciplinary
English	Regional Planning
French	Religious Studies
German	Sociology/Applied Social Research
Geography	Sociology/General Sociology
History	Sociology/Human Services
International Studies	Sociology of Disability Services
Journalism	Spanish
Latin American Studies	Spanish for Elementary Education
Pan-African Studies	Women's Studies

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## Degrees

The departments of Anthropology, Economics, English, Foreign Languages, Geography and Regional Planning, History, Journalism, Philosophy, Political Science, Religious Studies, and Sociology offer work leading to a Bachelor of Arts degree. The Bachelor of Science degree is offered in Regional Planning. The Bachelor of Science in Education is offered in English, Foreign Languages, Social Science, Social Studies, and Spanish.

Master of Arts or Master of Science degrees are offered by English, Geography and Regional Planning, History, Political Science, and Sociology. The English and Sociology departments offer the Doctor of Philosophy degree. Information about these programs may be obtained from the School of Graduate Studies and Research.

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## Pre-Law Interdisciplinary Minor

Successful lawyers possess excellent skills in writing and speaking and can analyze a problem and explain its solution in clear, logical terms. The Pre-Law Interdisciplinary Minor prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination. This minor may be taken with any major other than those with Pre-Law Tracks. Although a pre-law minor is not required for law school admission, this interdisciplinary minor will provide students with the prerequisite skills for law school. Interested students should contact the Office of the Dean in the College of Humanities and Social Sciences.

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## Pre-Law Interdisciplinary Minor

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Seven courses, including at least one from each of the seven areas

(no courses with student's major prefix):

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 225

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Philosophy:* PHIL 101, 110, 222, 450

*Political Science:* PLSC 358, 359, 361

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## Departmental Honors Tracks

Departmental honors tracks in the College of Humanities and Social Sciences enable eligible students to participate in advanced study in their disciplines. These tracks are particularly encouraged for students who intend to seek admission to graduate or professional schools.

Honors coursework is recorded on university transcripts, and students completing the departmental honors tracks will be recognized at commencement ceremonies. For detailed guidance in departmental honors tracks, students should consult the description in their major department and meet with their advisors.

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## Junior-Year Review

A review of degree requirements is completed for all students who are candidates for a degree offered by the college. The purpose of the review is to verify that a student is on track to meet graduation requirements by their anticipated graduation date. Completed junior-year review reports must be approved by the department chairperson and the dean's associate.

*It remains the student's responsibility to apply for graduation by the announced deadline. Failure to meet the graduation application deadline may result in a delay in the student's graduation.*

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## College Foreign Language Requirements

Students in the College of Humanities and Social Sciences must demonstrate an intermediate level of foreign language proficiency as a college requirement for graduation. They may choose any of the languages offered, including self-instruction in the Critical Languages, described below. Intermediate-level foreign language courses in French, German, Italian, and Spanish will also count as Liberal Studies electives.

For students with previous foreign language instruction or experience, individual placement into foreign language courses may be done during placement testing and registration prior to the first semester at IUP. Students whose placement test demonstrates competence equivalent to the intermediate level are considered to have fulfilled the foreign language requirement. Students with no previous foreign language background will take entry-level courses, which may be counted as free electives in the total required for graduation.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement if the department of the student's major does not require a specific foreign language.

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## Degree Requirements

In addition to the university's Liberal Studies requirements, students seeking a baccalaureate degree in this college must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and the requirements for those

minoring in a specific field, appear in the department sections that follow. A dual baccalaureate degree or double major or minor may encompass a discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Humanities and Social Sciences majors. The intermediate-level foreign language requirement (description follows) applies without exception to all Humanities and Social Sciences four-year degree programs.

### Critical Languages Program

The Critical Languages program is a self-instructional/tutorial approach to less commonly taught foreign languages. Students meet with a tutor three hours per week in addition to practicing with audiocassettes. Most tutors are native speakers of the language. Professional teachers of the specific language may be brought in from other universities to evaluate student performance. The final grade is based on final examination as well as on performance during the tutorial sessions. Interested students must contact the coordinator before registration. Each course carries 3 credits.

The following languages may be available for study: Arabic, Chinese, Dutch, Finnish, Modern Greek, Hebrew, Hindi, Hungarian, Japanese, Korean, Portuguese, Russian, Swahili, and Swedish.

### Internship Programs

Humanities and Social Sciences departments have internship programs which allow students to engage in supervised off-campus work experience for credit. IUP students have worked in Harrisburg as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as peer group counselors on the local campus, as assistants to the Pennsylvania state Republican chairperson, as on-site guides at the United Nations, as workers on an Israeli kibbutz, and as student aides for the Department of Education in Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state levels. At the county level, they have been attached to the offices of the county planner, the Common Pleas Court, the coroner, the treasurer, commissioners, and the borough manager. Students have also worked in the Washington offices of Pennsylvania congressmen and in many federal and international organizations in Washington as well. Opportunities for internships in other countries also exist. For more information about specific internship programs, students should consult with the chair of the department in which the student is majoring.

### Foreign Study Programs

College majors may be interested in the various foreign study programs and tours offered. Credits obtained through such arrangements normally are applicable toward a Humanities and Social Sciences degree. Also of interest are the college's credit-awarding programs at Valladolid (Spain) and Nancy (France), as well as the Summer Study in Mexico Program.

**IUP at Costa Rica Summer Program:** The Foreign Languages Department has established a four-week study program at the National University of Costa Rica, located in Heredia. Participants live with Costa Rican families and take classes at the university. This program is intended for students who are going abroad for the first time, and preference is given to beginning students. Participants earn four transfer credits in Spanish from the UNA. For details and brochures, contact the Foreign Languages Department.

**IUP at Mexico Summer Program:** The Foreign Languages Department sponsors a program of study in Spanish language in Mexico. The program is located at Cuernavaca, and the cost of the program includes transportation, complete room and board, insurance, and tuition. The student may earn up to 6 credits of undergraduate or graduate credit. Internship opportunities are available for students with fluency in Spanish. For details and brochures, contact the Foreign Languages Department.

**IUP at Nancy:** IUP has established a study program with the University of Nancy, France. Participants in the Nancy program must pay a foreign exchange fee for each semester in the program. For details, contact the Foreign Languages Department.

**IUP at Valladolid:** Through the Foreign Languages Department, the university has offered a spring semester of study at the University of Valladolid, Spain, for more than forty years. The participants live in private homes. For details, contact the Foreign Languages Department.

### John P. Murtha Institute for Homeland Security

**Codirectors:** Dighton M. Fiddner, Werner D. Lippert  
**Website:** [www.iup.edu/murthainstitute](http://www.iup.edu/murthainstitute)

The mission of the Murtha Institute is to provide high-quality educational programs, conduct significant research, and provide effective community outreach in the areas of homeland security and homeland defense. Its focus areas are education, outreach and training, and research and development in homeland security, which includes emergency management, public health preparedness, security and intelligence, and homeland defense. Created in 2005, the Murtha Institute is located in the Office of the Dean, 211 McElhane Hall.

### Asian Studies Program

**Stuart Chandler, Coordinator**

The Committee of Asian Studies offers a major and a minor to provide students with the opportunity to increase their knowledge of the world's largest, most populous, and most diverse continent. The program emphasizes an interdisciplinary approach and requires students to complement their Asian Studies degree with a minor or second major, preferably in such fields as Anthropology, Economics, Fine Arts, Geography, History, International Business, International Studies, Journalism, Political Science, and Religious Studies. Students enrolled in the Asian Studies major or minor will find that the course offerings furnish excellent preparation for careers in business, government, journalism, and teaching.

To complete the Asian Studies major, a student must take a minimum of 33 credits in courses dealing with Asia and 15-21 credits in a minor of the student's choice (with a second major also fulfilling the latter requirement). All Asian Studies majors must take ASIA 200 and must demonstrate at least an intermediate-level proficiency of an Asian Language, doing so either by passing the intermediate sequence of one of the Asian languages offered at IUP or by demonstrating that they have acquired the equivalent proficiency level elsewhere. The remaining courses to be taken fall into two groups: "Category A: Exclusively Asia-Focused" and "Category B: Substantially Asia-Focused." At least 21 credits must come from Category A; no more than 3 credits may come from Category B.

To minor in Asian Studies, students must complete a minimum of 18 credits, no more than 6 of which may have the prefix of their major. ASIA 200 is required of all Asian Studies minors. At least 12 credits must come from Category A: Exclusively Asia-Focused. Three credits of an Asian language course may apply to the Category A requirement. No more than 3 credits from Category B: Substantially Asia-Focused may be applied to the minor.

### Bachelor of Arts-Asian Studies

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications:	48
<b>Mathematics:</b> 3cr	
<b>Liberal Studies Electives:</b> 3cr	
<b>Major:</b>	33
<b>Required Course:</b>	3cr
ASIA 200 Introduction to Asian Studies	
<b>Controlled Electives:</b> (1)	30cr
One of the following sequences of intermediate Asian languages: (2)	0-6cr
CHIN 201/202 Intermediate Chinese	
CRLG 201/251 Arabic III, IV	
CRLG 205/255 Hindi III, IV	
CRLG 208/258 Japanese III, IV	
CRLG 209/259 Korean III, IV	
CRLG 214/264 Hebrew III, IV	

<b>Category A: Exclusively Asia-Focused (3, 4)</b>	21-30cr
At least 18cr earned through the following courses:	
ANTH/SOC 272 Cultural Area Studies: China	3cr
ANTH/SOC 273 Cultural Area Studies: Southeast Asia	3cr
ARHI 224 Introduction to Asian Art	3cr
ARHI 423 Art of Japan	3cr
ARHI 424 Art of India and Southeast Asia	3cr
ARHI 425 Arts of China	3cr
GEOG 256 Geography of East Asia	3cr
GEOG 257 Geography of South and Southeast Asia	3cr
HIST 206 History of East Asia	3cr
HIST 330 History of the Islamic Civilization	3cr
HIST 331 Modern Middle East	3cr
HIST 332 History of Early China	3cr
HIST 334 History of Modern China	3cr
HIST 337 History of Modern Japan	3cr
PLSC 383 Political Systems: Asia	3cr
PLSC 384 Political Systems: Middle East	3cr
RLST 220 Buddhist Thought and Practice	3cr
RLST 311 Eastern Philosophy	3cr
RLST 370 Religions of China and Japan	3cr
RLST 373 Advanced Studies in Buddhism	3cr
RLST 375 Religions of India	3cr
RLST 380 Islam	3cr
<b>Category B: Substantially Asia-Focused (3, 4, 5)</b>	0-6cr
No more than 3cr earned through the following courses:	
BTST 342 Intercultural Business Communication	3cr
ECON 339 Economic Development I	3cr
ECON 350 Comparative Economic Systems	3cr
ENGL/FNLG 396 The Literature of Emerging Nations	3cr
GEOG 104 Geography of the Non-Western World	3cr
GEOG 254 Geography of Russia and the Soviet Sphere	3cr
MGMT 459 Seminar in International Management	3cr
PLSC 101 World Politics	3cr
PLSC 285 Comparative Government II: Non-Western Political Systems	3cr
RLST 110 World Religions	3cr

**Minor:** 15-21  
(may also be fulfilled by the completion of a second major)

**Free Electives:** 18-24

**Total Degree Requirements:** 120

- (1) At least 12cr must be at the 300 level or higher.
- (2) A student who has acquired an intermediate level of proficiency in an Asian language, but not through an accredited college program, may apply to the Asian Studies Committee to be exempt from 3 or 6 cr in intermediate language instruction. Such credits in these cases are to be replaced by taking additional Category A classes. Students who take advanced-level Asian language courses at IUP or another university may apply to the program director to have such credits partially fulfill the Category A requirements.
- (3) No more than 9cr of courses with the same departmental prefix may count toward Categories A and B.
- (4) The subject matter varies in: rotating topic courses (e.g., ENGL 344, 397, 398, or 399; HIST 403, and RLST 485); courses that utilize the case study approach (e.g., ECON 345, 346, MGMT/MKTG 350; MGMT 452, 454, MKTG 430, 441, and SOC 362); and special topics courses (i.e., classes numbered 281 and 481). When concerned with Asian Studies, these courses may be applied to either Category A or Category B with the approval of the Asian Studies Committee.
- (5) Certain courses may require additional prerequisites.

**Minor-Asian Studies (1, 2)** 18

**Required Course:** 3  
ASIA 200 Introduction to Asian Studies 3cr

**Category A: Exclusively Asia-Focused: (3)** 12-15  
ANTH/SOC 272; ANTH/SOC 273; ARHI 224; 423; 425;  
GEOG 256; 257; HIST 206; 330; 331; 332; 334; 337;  
PLSC 383; 384; RLST 220; 311; 370; 373; 375; 380  
Asian Critical Languages: 3cr each  
CRLG 101/151/201/251 Arabic I, II, III, IV  
CRLG 102/152/202/252 Chinese I, II, III, IV  
CRLG 105/155/205/255 Hindi I, II, III, IV  
CRLG 108/158/208/258 Japanese I, II, III, IV  
CRLG 109/159/209/259 Korean I, II, III, IV

**Category B: Substantially Asia-Focused:** 0-3  
BTST 342, ECON 339, 345, 346, 350, ENGL 344,  
ENGL/FNLG 396, ENGL 397, 398, GEOG 104, 254,  
MGMT 452, 454, 459, MKTG 350, 430,  
PLSC 101, 285, RLST 110, SOC 362

- (1) The topics in such courses as ENGL 399 Major Global Authors, HIST 403 Topics in Non-Western History, and ITST 281 Special Topics in Non-Western Studies vary (check with instructor). When concerned with Asian Studies, these courses can count towards the Asian Studies Minor with the approval of the program coordinator.
- (2) With the program coordinator's approval, 3cr of an internship (493) may be counted towards the Asian Studies Minor.
- (3) Courses need to be in at least two different prefixes.

For further information on the Asian Studies programs, contact the College of Humanities and Social Sciences, 201 McElhane Hall, 724-357-2280.

### Latin American Studies Minor

The Latin American Studies Minor is a multidisciplinary program that brings together courses focusing on the history, literature, culture, geography, political economy, and social organization of Latin America. This minor is designed to increase awareness and understanding of Latin American peoples, environments, and cultures. Its purpose is to combine an area focus with the liberal studies requirements of the IUP curriculum. The minor helps IUP students to enrich their understanding of world cultures and of the complexity of cultural diversity in a changing world. In addition, one goal is to expand student awareness of the contributions persons of this region have made to the United States and internationally. A Latin American Studies Minor is thus valuable in an increasingly diverse society, especially since people of Hispanic descent represent the largest minority population in the United States.

Students must complete 18 credits to earn a minor in Latin American Studies. In keeping with the multidisciplinary approach of the program, students are encouraged to take courses from departments throughout the university. Students can count no more than 9 credits from the same department (or 6 credits within their major) toward the minor. At least three courses (9 credits) must come from Category A: Exclusively Latin America-Focused. Other courses may come from either Category A or Category B: Substantially Latin America-Focused. Special topics and independent study courses may be applied to either category with the approval of the Latin American Studies Committee. Students enrolled in the colleges of Natural Sciences and Mathematics and Humanities and Social Sciences who are considering a minor in Latin American Studies are strongly encouraged to take SPAN 201 to complete their Liberal Studies language requirement. Students should consult with the program coordinator to determine if there are any prerequisites for the courses listed below. Through counseling, the program coordinator will work with individual departments to determine if students might be qualified for prerequisite exemptions. Students who complete courses through established study-abroad centers in Latin America can apply for credit towards the Latin American Studies Minor. Each request for transfer credit will be considered on a case-by-case basis by the program coordinator.

- **Required Course:** LAS 480
- **Category A:** Exclusively Latin America-Focused courses are devoted to a combination or subset of the following topics: the countries which compose Latin America, its physical environments, and the human systems and cultures of the region.



- **Category B:** Substantially Latin America-Focused courses have significant material specifically about the countries which compose Latin America, its physical environments, and the human systems and cultures of the regions. The remainder of the course materials establishes relevant comparisons and contexts for Latin American themes.

**Minor–Latin American Studies 18**

**Required Course:** 3  
 LAS 480 Latin American Studies Seminar 3cr

**Category A: Exclusively Latin America-Focused 9-15**

ANTH/SOC 274	Cultural Area Studies: Latin America	3cr
ANTH/LAS 370	Latinos and Diasporas	3cr
ANTH 460	Ethnographic Field School (1)	3cr
ENGL 344	Ethnic American Literature (1)	3cr
GEOG 252	Geography of Latin America	3cr
GEOG 484	Field Studies in Geography and Social Studies (1)	3cr
HIST 208	Survey of Latin American History	3cr
HIST 350	History of Latin America: Colonial Period	3cr
HIST 351	History of Latin America: National Period	3cr
LAS 281	Special Topics in Latin American Studies	3cr
LAS 481	Special Topics in Latin American Studies	3cr
LAS 482	Independent Study	3cr
LAS 493	Internship (2)	3cr
PLSC 387	Political Systems: Latin America	3cr
PLSC 389	Developing Nations	3cr
SPAN 244	Modern Mexico	3cr
SPAN 260	Introduction to Hispanic Literature	3cr
SPAN 340	Hispanic Civilization Through the Nineteenth Century	3cr
SPAN 344	Twentieth Century Spanish-American Civilization and Culture	3cr
SPAN 364	Survey of Spanish-American Literature	3cr
SPAN 420	Modern Hispanic Theater	3cr
SPAN 421	Modern Hispanic Short Story	3cr
SPAN 430	Twentieth-Century Spanish-American Prose	3cr
SPAN 431	Spanish-American Poetry	3cr

**Category B: Substantially Latin America-Focused 0-6**

ECON 339	Economic Development I	3cr
ECON 345	International Trade	3cr
ECON 346	International Finance	3cr
ECON 350	Comparative Economic Systems	3cr
ENGL/FNLG 396	The Literature of Emerging Nations	3cr
MGMT/MKTG 350	International Business	3cr
MGMT 351	International Management	3cr
MGMT 452	Comparative Management	3cr
MGMT 454	International Competitiveness	3cr
MKTG 430	International Marketing	3cr
PLSC 285	Comparative Government II: Non-Western Political Systems	3cr

(1) The topic of ANTH 460, ENGL 344, and GEOG 484 varies (check with instructor). When concerned with Latin America or the Hispanic experience in the United States, these courses will count towards the Latin American Studies Minor.

(2) With the program coordinator’s approval, 3cr of an internship (LAS 493) may be counted towards the Latin American Studies Minor.

For further information on this minor, contact the College of Humanities and Social Sciences, 201 McElhane Hall, 724-357-2280.

**Pan-African Studies Minor**

The Pan-African Studies minor is a multidisciplinary program that brings together courses focusing on the vitality and accomplishments of pre-colonial African societies, the cultural and racial heritages of people of African descent in relationship to western societies, and aspects of modern-day African cultures. The cluster of courses included in this program represents a broad, diverse look at the diaspora of people of African origin.

The minor helps IUP students to enrich their cross-cultural studies; to heighten their awareness of, and sensitivity to, cultural diversity; and to expand their knowledge of world contributions of persons of African heritage. A Pan-African studies minor is thus valuable in an increasingly diverse society and attractive to employers and graduate schools alike.

**Minor–Pan-African Studies 18**

**Required Courses:** 6

HIST 365	History of Black America Since Emancipation	3cr
PNAF 131	Introduction to Pan-African Studies	3cr

**Controlled Electives:** Four courses from the following: 12

ANTH/SOC 271	Cultural Area Studies: Africa	3cr
ARHI 418	African Art	3cr
COMM 380	The History of African Americans in Film	3cr
ECON 339	Economic Development I	3cr
ENGL 348	African-American Literature	3cr
GEOG 255	Geography of Africa	3cr
HIST 355	African History I: Antiquity to 1600	3cr
HIST 356	African History II: 1600 to Present	3cr
HIST 366	African-American Women	3cr
MUSC 300	Black Music in America and Diaspora	3cr
PLSC 382	Political Systems: Africa	3cr
PNAF 281	Special Topics in Pan-African Studies	3cr
PNAF 481	Special Topics in Pan-African Studies	3cr
PNAF 482	Independent Study	3cr
PNAF 493	Pan-African Studies Internship	3cr
RLST 360	African Religions	3cr

For further information on this minor, contact the College of Humanities and Social Sciences, 201 McElhane Hall, 724-357-2280.

**Women’s Studies Program**

**Website:** [www.iup.edu/womens](http://www.iup.edu/womens)

**Chauna J. Craig, Director**

The Women’s Studies minor is designed to examine the status and experiences of women from a multidisciplinary perspective. The courses use a variety of methods and disciplinary perspectives to explore the impact of gender on the experiences of the individual. Women’s contributions to a variety of fields and the historical, literary, and cultural images of women are also addressed. Students are encouraged to challenge traditional theories and research regarding women and to develop a critical, multidisciplinary, multicultural, and gendered view of the world. Courses taught within the minor typically involve the students through innovative, experiential classroom exercises and written assignments. Courses in Women’s Studies address social equity issues and encourage students to perceive themselves as capable of transforming society.

A minor in Women’s Studies indicates to the prospective employer an awareness of and sensitivity to gender issues. This awareness may be needed in the following positions: personnel specialist, affirmative action officer, crisis intervention specialist, family and youth services provider, legal advocate. A minor in Women’s Studies can contribute to success in a variety of fields including communication, counseling, criminology, education, health, journalism, law, politics, psychology, and applied sociology.

Students interested in attending graduate school will also find a minor in Women’s Studies valuable for a variety of areas, including English, history, studies in the social sciences, and law school.

**Minor–Women’s Studies 15**

**Required course:** 3

WMST 200	Introduction to Women’s Studies	3cr
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Students receive approval for a specified course of study from the following: (1) 12

ANTH 350	Anthropology of Women	3cr
CRIM 450	Women and Crime	3cr
ENGL 225	Introduction to Literature by Women	3cr
ENGL 336	Language, Gender, and Society	3cr

ENGL 385	Advanced Women's Literature	3cr
FRNC 301	Portraits of Women in the French Novel (currently inactive)	3cr
HIST 366	African-American Women	3cr
HIST 369	Women in America	3cr
HIST 390	History of Women–World Cultures	3cr
JRNL 250	Women and the Press	3cr
PHIL 232	Philosophical Perspectives on Love, Marriage, and Divorce	3cr
PSYC 379	Psychology of Human Sexuality	3cr
PSYC 411	Psychology of Women	3cr
RLST 245	Women and Religion	3cr
RLST 345	Women in the Bible	3cr
RLST 485	Selected Topics in Feminist Studies of Religion	3cr
SOC 251	Sociology of Human Sexuality	3cr
SOC 363	Sociology of Gender	3cr
SOC 427	Social Perspectives on Intimate Partner Violence	3cr
WMST 400	Feminist Theory	3cr
WMST 430	Gender, Sexuality, and Sport: A Feminist Perspective (currently inactive)	3cr
WMST 482	Independent Study	var-1-3cr
XXXX 481	Special Topics (2) (offered within department)	var-1-3cr
XXXX 493	Internship (3)	var-1-3cr

- (1) Students receive approval for a specified course of study from the above list of courses and, with permission from the director of Women's Studies, from selected women's studies courses that have been recently developed. Please see webpage [www.iup.edu/womens](http://www.iup.edu/womens) for current information.
- (2) Examples of XXXX 481 offered: ART 481 Maidens to Madonna, BTED 481 Women and Business, and WMST 481 Special Topics in Women's Studies.
- (3) Internships (up to 3cr) may be counted towards the minor.

## Department of Anthropology

**Website:** [www.iup.edu/anthropology](http://www.iup.edu/anthropology)

**Philip D. Neusius, Chairperson;** Allard, Chiarulli, Ford, Garcia, S. Neusius, Poole; and professor emerita Lanham

The Anthropology Department promotes awareness of anthropological knowledge and methods and seeks to further the discipline and its applications to the problems of the contemporary world. Through teaching, research, and involvement in campus and community events and programs, the Anthropology faculty members contribute to the liberal education of IUP students. The Anthropology major itself equips students with knowledge and skills needed for full participation in the global environment of the twenty-first century.

Anthropology emphasizes the study of human biological and cultural diversity within its four subfields: sociocultural anthropology, biological anthropology, linguistic(s) anthropology, and archaeology. All students receive a solid foundation in the discipline of anthropology and tailor their major to specific interests by following one of the three tracks.

The General Anthropology Track ensures that students receive a strong foundation in all four subdisciplines of Anthropology while simultaneously permitting them a great deal of freedom to explore a variety of issues in Anthropology and to tailor the curriculum to the students' own interests. The General Track is suitable for any Anthropology major or students seeking to double major in Anthropology.

The Archaeology Track provides an emphasis on the study of culture through the material remains of human behavior. This track provides training for careers in the growing fields of cultural resource management and historic preservation, with opportunities for employment in both government and the private sector. This track usually is the preferred option for students intending to pursue archaeology at the graduate level as well. Students in this track take archaeological methods, theory, and area

courses as well as Anthropology core courses and electives. A wide variety of internship opportunities provide hands-on training in these areas.

The Applied Anthropology Track provides students with a background in anthropological method and theory, a cross-cultural perspective, and an avenue to translate this knowledge into action through internships and research. Examples of career opportunities include program design, implementation, and evaluation; policy analysis and administrative and managerial development; assessment of current and future human needs; and creation of strategies for social intervention and advocacy. In consultation with an advisor, each student will develop his or her own curriculum in order to build expertise in a specific topical area.

The department also offers preparation to be certified in the teaching of social studies with a concentration in anthropology. This program leads to a Bachelor of Science in Education degree. With its emphasis on cross-cultural comparisons, the realities of contemporary global cultures, and cultural resource management, anthropology provides a solid foundation for teaching social science at the secondary level. The department also offers a minor in anthropology.

### Anthropology Honors Program

The honors program is open by departmental permission to declared Anthropology majors with a minimum 3.25 cumulative GPA and a 3.25 GPA in Anthropology courses. Students complete ANTH 483; CHSS 489 (a multidisciplinary colloquium emphasizing problem-solving, discussion, reading, and writing on a topic or theme); and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. To determine how honors track courses will be integrated into existing requirements for the Anthropology major, students should consult their advisors.

To apply, students must petition the department honors committee for admission no earlier than the completion of the sophomore year. An application must be filed with the chairperson of the Department of Anthropology and should include an application form, a letter of intent, a description of the work plan, a full transcript, and two letters of recommendation from faculty members.

### Bachelor of Arts–Anthropology/General Anthropology Track

**Liberal Studies:** As outlined in Liberal Studies section 53 with the following specifications:

**Mathematics:** MATH 217

**Social Science:** GEOG 104 (recommended)

**Liberal Studies Electives:** 9cr, no courses with ANTH prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 36

#### Required Courses:

ANTH 211	Cultural Anthropology	3cr
ANTH 222	Biological Anthropology	3cr
ANTH 233	Language and Culture	3cr
ANTH 244	Basic Archaeology	3cr
ANTH 456	Ethnographic Research Methods <i>or</i> ANTH 425 Archaeology Theory and Research Design	3cr
ANTH 480	Anthropology Seminar	3cr

#### Controlled Electives:

Two courses in Topical Area Ethnography such as ANTH 271, 272, 273, 274, 314, 370	6cr
Three additional ANTH electives (300 or 400 level)	9cr
One additional ANTH elective (any level)	3cr

**Free Electives:** 25-31 (2)

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) State System Board of Governors' policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 and above.

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**Bachelor of Arts–Anthropology/Archaeology Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54

**Mathematics:** MATH 217

**Natural Science:** GEOS 121-122 and 131-132 (recommended)

**Social Science:** ANTH 213, GEOG 104 (recommended)

**Liberal Studies Electives:** 9cr, no courses with ANTH prefix

**College:** 0-6

Foreign Language Intermediate Level (1)

**Major:** 39

**Required Courses:**

ANTH 211 Cultural Anthropology 3cr

ANTH 222 Biological Anthropology 3cr

ANTH 233 Language and Culture 3cr

ANTH 244 Basic Archaeology 3cr

**Controlled Electives:**

Three methods courses:

ANTH 320 Archaeological Field School (2, 3) 6cr

ANTH 325 Archaeological Lab Methods 3cr

ANTH 415 Cultural Resource Management 3cr

Two theory courses: ANTH 425 and 480 6cr

One archaeology area course such as ANTH 315 or 323 3cr

Any two anthropology courses from the following: 6cr

ANTH 271/272/273/274, ANTH 314, 318, 370, 420, 484 (3), or 485 (3)

**Free Electives:** (4, 5) 21-27

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
  - (2) With departmental approval, an equivalent field school with lab component from another university may be used.
  - (3) May be repeated for credit with departmental approval but may only count once toward the requirements of the Archaeology Track.
  - (4) A minor in Geoscience, Geography, History, or other approved field is recommended. An internship (ANTH 493) also is recommended. Your advisor should be consulted.
  - (5) State System Board of Governors' policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 and above.
- 

**Bachelor of Arts–Anthropology/Applied Anthropology Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217

**Social Science:** GEOG 104 (recommended)

**Liberal Studies Electives:** 9cr, no courses with ANTH prefix

**College:** 0-6

Foreign Language Intermediate Level (1)

**Major:** 36

**Required Courses:**

ANTH 211 Cultural Anthropology 3cr

ANTH 222 Biological Anthropology 3cr

ANTH 233 Language and Culture 3cr

ANTH 244 Basic Archaeology 3cr

Two methods courses: ANTH 360, 456 6cr

One theory course: ANTH 480 3cr

**Controlled Electives:**

One area course from the following: ANTH 271, 272, 273, 274, 314, 370 3cr

Two additional ANTH electives (300 or 400 level) 6cr

ANTH 493 Internship in Anthropology *or* 6cr

ANTH 460 Ethnographic Field School (2)

**Free Electives:** 25-31 (3)

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
  - (2) An internship or ethnographic field school is highly desirable but may be replaced by 6cr of pragmatic skill courses upon approval of the advisor.
  - (3) State System Board of Governors' policy states that at least 40 percent of the coursework in a degree must consist of courses numbered 300 and above.
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**Bachelor of Science in Education–Social Science Education/Anthropology Track (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Humanities/History:** fulfilled by required courses in major

**Mathematics:** 3cr

**Natural Science:** BIOL 103-104 or two of the following:

GEOS 101-102, GEOS 103-104, GEOS 105-106

**Social Science:** ANTH 211, ECON 121, PSYC 101

**Liberal Studies Electives:** 6cr, PSYC 310 or 330, SOC 362 or 363, no courses with ANTH prefix

**College:** 35

3 additional cr of MATH 100 level or above 3cr  
(in addition to Liberal Studies Mathematics) (1)

**Preprofessional Sequence:**

COMM 103 Digital Instructional Technology 3cr

EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

CHSS 342 Social Studies Teaching Lab 1cr

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr

EDEX 323 Instruction of English Language Learners with Special Needs 2cr

EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr

EDUC 242 Pre-Student Teaching Clinical Experience I 1cr

EDUC 342 Pre-Student Teaching Clinical Experience II 1cr

EDUC 441 Student Teaching 12cr

EDUC 442 School Law 1cr

EDUC 455 Teaching of Social Studies in Secondary Schools 3cr

**Major:** 21

**Required Courses:**

ANTH 211 Cultural Anthropology \*cr (2)

ANTH 213 World Archaeology 3cr

ANTH 222 Biological Anthropology 3cr

One additional interdisciplinary course from the following:

ANTH 233 Language and Culture *or* 3cr

ANTH 244 Basic Archaeology

Two area ethnography courses from the following:

ANTH 271, 272, 273, 274, 314, 370 6cr

Two additional Anthropology courses numbered 300 or above 6cr

**History Distributional Requirements:** 9

HIST 202 Western Civilization Since 1600 3cr

HIST 204 United States History to 1877 3cr

HIST 205 United States History Since 1877 3cr

**Social Science Distribution Requirements:** 9

GEOG 230 Cultural Geography 3cr

PLSC 280 Comparative Government I: Western Political

PLSC 285 Systems *or* Comparative Government II:

Non-Western Political Systems 3cr

SOC 151 Principles of Sociology *or*

SOC 231 Contemporary Social Problems 3cr

**Free Electives:** 1

**Total Degree Requirements:** 123

- (\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.
- (1) Students are required to take an additional 3cr of MATH beyond the Liberal Studies requirements for a total of 6cr, all of which must be 100 level or above.
- (2) Courses counted toward Liberal Studies credits do not receive duplicate credit in major.

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**Minor–Anthropology 15**

**Required Course:**

ANTH 110 Contemporary Anthropology 3cr

**Controlled Electives:**

Four additional courses in Anthropology 12cr

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**Anthropology Honors Track 12**

**Prerequisites:** Declared major in Anthropology, completion of 60cr, and permission of department honors committee, academic advisor, and department chair

**Required Courses:**

ANTH 483/H/ Honors Thesis in Anthropology 6cr  
 CHSS 489/H/ Honors Colloquium 3cr  
 HNRC 499 Honors Senior Synthesis \*cr (1)

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.
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**Department of Economics**

**Website:** [www.iup.edu/economics](http://www.iup.edu/economics)

**Nicholas Karatjas, Chairperson;** Dyal, Jackson, J. Jozefowicz, S. Jozefowicz, Julian, Potts, Radell, Sissoko, Yerger; and professors emeriti Martel, Stonebraker, Walker

Economics provides a background and educational base that open a broad range of professional, educational, and vocational opportunities. As part of a Humanities and Social Sciences degree, a Bachelor of Arts degree with a major in Economics provides a liberal arts education, as well as professional and technical training. Indeed, many students completing an undergraduate major in Economics do not pursue careers as professional economists; they enter such fields as law, management, finance, and labor relations. By helping to develop a student's ability to think and communicate, economics provides a firm foundation upon which the student can build any one of a large number of possible careers.

Four different degree programs are available: a Bachelor of Arts degree with a major in Economics that prepares students for immediate employment or graduate school; a Bachelor of Arts degree with a major in Economics/Pre-Law track for students who wish to attend law school; a Bachelor of Arts degree with a major in Economics/Mathematics\* combining courses in both areas to prepare students for graduate study in economics or possible immediate employment; and the Bachelor of Science in Education that prepares students to teach economics and other social sciences in secondary schools.

Either ECON 101 or 121 counts as a Liberal Studies social science course. However, ECON 101 is intended for students who will take only one course in the field. Students who anticipate taking more than one economics course should schedule ECON 121. ECON 101 will not count toward either a major or minor in economics and may not be taken after the successful completion of, or in concurrent registrations with, any other economics course.

Economics majors are encouraged to minor in one of the other Social Sciences, Business Administration, Mathematics, or Applied Statistics.

The department houses the Center for Economic Education. The center is a nonprofit, nonpartisan organization affiliated with both the Pennsylvania Partnership for Economic Education and the National Council on Eco-

nomics Education. Its mission is to upgrade the quality of economic education in kindergarten through twelfth grade. The center performs the following functions: teacher training, consulting services, research, materials development, and programs in economic education for adults. Dr. James J. Jozefowicz and Dr. Stephanie M. Jozefowicz are co-directors of the center.

*\*In July 2010, the B.A. degree with a major in Economics/Mathematics was placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

**Economics Honors Program**

The honors program is open by departmental permission to Economics and Economics/Pre-Law majors in the College of Humanities and Social Sciences with a minimum 3.25 cumulative GPA and a 3.25 GPA in Economics courses. Students complete ECON 355, 356, 483, and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. Students must earn at least a grade of C in each course completed for the track. Students should consult their advisors to determine how honors track courses will be integrated into existing requirements for the Economics or Economics/Pre-Law majors.

To apply, an application should be filed with the chairperson of the Department of Economics.

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**Bachelor of Arts–Economics**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54

**Mathematics:** MATH 121 (1)

**Social Science:** ECON 121

**Liberal Studies Electives:** 9cr, no courses with ECON prefix

**College:** 0-6  
 Foreign Language Intermediate Level (2)

**Major:** 27

**Required Courses:**

ECON 122 Principles of Microeconomics 3cr  
 ECON 355 Statistics for Economists 3cr (3)  
 ECON 421 Macroeconomic Analysis 3cr  
 ECON 422 Microeconomic Analysis 3cr

**Controlled Electives:**

Five other ECON courses (4, 5) 15cr

**Free Electives:** 33-39

**Total Degree Requirements:** 120

- (1) MATH 115 or 125 may be substituted for MATH 121.  
 (2) Intermediate-level Foreign Language may be included in Liberal Studies electives.  
 (3) MATH 214, 216, 217, or 363 may be substituted for ECON 355.  
 (4) No more than 6cr of internship credit may be applied toward major.  
 (5) No more than two ECON Controlled Electives may be 200-level courses.
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**Bachelor of Arts–Economics/Pre-Law Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 54

**Mathematics:** MATH 121 (1)

**Social Science:** ECON 121

**Liberal Studies Electives:** 9cr, no courses with ECON prefix

**College:** 0-6  
 Foreign Language Intermediate Level (2)

**Major:** 24

**Required Courses:**

ECON 122 Principles of Microeconomics 3cr  
 ECON 355 Statistics for Economists (3) 3cr

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ECON 421	Macroeconomic Analysis	3cr
ECON 422	Microeconomic Analysis	3cr
<b>Controlled Electives:</b>		
Four other ECON courses (4, 5)		12cr
<b>Other Requirements: Pre-Law Interdisciplinary Track</b>		
Seven courses, including at least one from each of six areas:		15-21
<i>Business:</i> ACCT 201, ACCT 202, BLAW 235		
<i>Criminology:</i> CRIM 210, 215, 255		
<i>English:</i> ENGL 212, 265, 310, 321		
<i>History:</i> HIST 320, 321, 346		
<i>Philosophy:</i> PHIL 101, 110, 222, 450		
<i>Political Science:</i> PLSC 358, 359, 361		

**Free Electives:** 15-27  
**Total Degree Requirements:** 120

- (1) MATH 115 or 125 may be substituted for MATH 121.
- (2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (3) MATH 214, 216, 217, or 363 may be substituted for ECON 355.
- (4) No more than 6cr of internship credit may be applied toward major.
- (5) No more than one ECON Controlled Elective may be a 200-level course.

### Bachelor of Science in Education–Social Studies Education/ Economics Track (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** 3cr

**Social Science:** ANTH 110, ECON 121, PSYC 101

**Liberal Studies Electives:** 6cr, GEOG 230, SOC 337, no courses with ECON prefix

**College:** 35  
 3 additional cr of MATH 100 level or above (in addition to Liberal Studies MATH) (1) 3cr

**Preprofessional Education Sequence:**

COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Professional Education Sequence:**

CHSS 342	Social Studies Teaching Lab	1cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 441	Student Teaching	12cr
EDUC 442	School Law	1cr
EDUC 455	Teaching of Social Studies in Secondary Schools	3cr

**Major:** 18  
**Required Courses:**

ECON 122	Principles of Microeconomics	3cr
<b>Controlled Electives:</b> Upper-level Economics courses including at least one writing-intensive course and at least one course from each of the following three groups: 15cr		

*International courses:* ECON 339, 345, 346, 350, 351 (ECON 351 is currently an inactive course)

*Macroeconomic courses:* ECON 325, 326, 343, 421  
*Microeconomic courses:* ECON 330, 331, 332, 333, 334, 335, 336, 361, 373, 383

**Other Requirements:** 21

**Social Studies Distribution:**

GEOG XXX	200-level or higher Geography course	3cr
HIST 204	United States History to 1877	3cr

HIST 205	United States History Since 1877	3cr
PLSC 111	American Politics	3cr
PLSC 280	Comparative Government I: Western Political Systems	3cr
PLSC 285	Comparative Government II: Non-Western Political Systems	3cr
Social Studies Minor		6cr (2)

**Free Electives:** 1  
**Total Degree Requirements:** 123

- (\*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog. In order to student teach, students must have a 3.0 cumulative GPA in their major (social studies and economics courses).
- (1) Students are required to take an additional 3cr of MATH beyond the Liberal Studies requirement for a total of 6cr, all of which must be at the 100 level or above.
  - (2) History is the recommended choice for a minor. However, students may complete a minor in any of the other Social Studies fields included in the Social Studies Education certification. Choosing a field other than history may require additional credits.

### Minor–Economics 15

**Required Courses:**

ECON 121	Principles of Macroeconomics	3cr
ECON 122	Principles of Microeconomics	3cr
Three courses from ECON 200 or higher		9cr

### Economics Honors Track 12cr

**Required Courses:**

ECON 355	Statistics for Economists	3cr
ECON 356/H/	Introduction to Econometrics	3cr
ECON 483/H/	Honors Thesis in Economics	3cr
HNRC 499	Honors Senior Synthesis	*cr (1)

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.

## Department of English

**Website:** [www.iup.edu/english](http://www.iup.edu/english)

**Gian S. Pagnucci, Chair;** Alvine, Berlin, P. Bizzaro, R. Bizzaro, Black, Branscum, Cahalan, Camp, Carse, Chow, Comfort, Craig, Dandurand, Deckert, Downing, Dube, Farrington, Goebel, Hanauer, Hibsman, Hurlbert, Kerr, Kuipers, Marsden, Miller, Nienkamp, Norris, Orchard, Park, Perdue, Powers, Raftery, Savova, Sell, Shelly, Sherwood, Sitler, Slater, Stilwell, Tannacito, Thompson, Villa, Watson, Welsh, M. M. Williamson, M. T. Williamson, Yang; and professors emeriti Aghbar, Bencich, Betts, Bower, J. Bright, L. Bright, Craig, Davis, Freund, Gatti, Gebhard, Gray, M. Hayward, B. Hudson, S. Hudson, Krupnik, McAndrew, McPherson, Miller, Nania, Ray, Roffman, Roumm, Seinfeld, Smith, Smits, Swigart, Vella, J. Wilson, K. Wilson, Woodworth

The program of studies in the English Department at IUP focuses on critical thinking and effective reading and writing at all levels. English majors study a wide variety of subjects ranging from literary theory to practical pedagogy in an atmosphere that encourages and fosters a high degree of professional commitment.

The English Department’s Bachelor of Arts degree with a major in English reflects the diversity of subject matter, methods, and purposes of this vital, constantly evolving field. B.A. majors will have the opportunity to pursue the traditional concern of literary study—the careful analysis of canonized works—as well as encounter and analyze texts by members of traditionally marginalized groups and texts that are nontraditional or innovative in form and content. We encourage students to design their course of study so that

they can be active and capable members of the global community and effective contributors to the multicultural workplace. To these ends, the department is committed to promoting and supporting an intellectual environment in which minority writers, nontraditional texts, and a variety of critical perspectives are an integral part of the curriculum.

After completing the introductory course in English (ENGL 122), all B.A. majors will take a core of 15 credits: 6 credits of historical/regional literary survey courses; 3 credits of a writing course; 3 credits of a rhetoric, speech, or linguistics course; and 3 credits of an upper-level capstone course. In addition to these core courses, all B.A. majors will take 6 credits of English elective courses and declare a track of 15 credits, chosen from the following: Film Studies; Language Studies; Literary, Textual, and Cultural Studies; or Writing Studies.

Since the B.A. major can be completed with 36 credits of coursework, students will have 25-31 credits outside of the Liberal Studies requirements to develop other interests, including a second major or a minor. In addition to creating these sorts of academic connections, we encourage our students to explore and enhance links between their scholarship and their professional goals by seeking an internship in their junior or senior year. Students should explore their options carefully with their advisors.

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### English–Film Studies Track

The Film Studies Track enables students to design a course of study in the history, meaning, function, and aesthetics of films of all genres and countries of origin. A student who completes this track will be able to recognize major developments in the history of film; apply the analytical skills and methods best suited to comprehend the significance and aesthetics of films; analyze the ways visual imagery interacts with audience, culture, medium, and ideology; and recognize and analyze the ways in which films communicate ideas about race, gender, sexual orientation, and identity. The Film Studies Track prepares students for any profession that requires strong analytic, cultural, and aesthetic skills and for academic study in cultural studies.

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### English–Language Studies Track

The Language Studies Track enables students to design a course of study in language development, structure, and use. A student who completes this track will be able to identify and analyze the social and political applications of language used by and about speakers, writers, and subjects from both dominant and underrepresented linguistic communities; apply an increased language sensibility to personal, academic, social, and professional communication; and analyze specific discourse types and contexts. The Language Studies Track prepares students for any profession that requires strong analytic skills and for academic study in rhetoric and linguistics.

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### English–Literary, Textual, and Cultural Studies Track

The Literary, Textual, and Cultural Studies Track enables students to design a course of study in the history, meaning, function, and aesthetics of texts of all kinds, especially literary texts. A student who completes this track will be able to identify the unique material, symbolic, formal, and aesthetic qualities of texts of all kinds, especially literary texts; apply the analytical skills and methods best suited to comprehend the significance of texts; analyze the ways that texts of all kinds interact with audience, culture, medium, and ideology; evaluate the role of theory—its methods, history, politics, and functions—in literary, textual, and cultural studies analysis; and examine the ways in which questions of race, gender, sexual orientation, and identity affect our interactions with both traditional and nontraditional literature and theory. The Literary, Textual, and Cultural Studies Track prepares students for any profession that requires strong analytic, communication, cultural, and aesthetic skills and for academic study in literary and cultural studies.

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### English–Writing Studies Track

The Writing Studies Track enables students to design a course of study in the theory and practice of writing in a variety of genres. A student who completes this track will be able to demonstrate skills in the analysis, construction, and presentation of texts; to identify and apply productive, effective, and creative approaches to writing tasks for diverse audiences; and to create a portfolio of writing for use in applying to graduate programs

or for professional positions. The Writing Studies Track prepares students for any career that requires professional writing skills.

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### English/Pre-Law Track

This track enables students to design a course of study in the history and practice of persuasive communication, interpretation, and the cultural power of literary representation. A student who completes the Pre-Law Track will be able to identify, evaluate, and apply varied forms of analysis and argumentation; read, write, speak, and think in thoughtful, informed, persuasive fashion; understand and distinguish the culturally and historically specific relationships among language, cultural power, and interpretation, both in terms of persuasive writing and speech and the literary representations of minorities. The track should also enable students to do well on law school admissions essays and examinations in law school.

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### Education Program

The English Department offers a program leading to the Bachelor of Science in Education degree with a major in English Education. This program has been accredited by the National Council for Accreditation of Teacher Education. Graduates are prepared to teach in middle, junior high, and senior high schools.

English Education majors fulfill all of the requirements for state certification, including practical experience in methods courses and student teaching; content preparation in a variety of literature, language, and composition courses; and philosophical background in current theories of teaching. Although most students choosing an English Education major will be best prepared for the secondary school classroom, those who opt not to teach will find that their speaking, writing, and management skills may also be useful to the media, governmental services, and business.

Program requirements are available at the English Department office and in the *English Education Handbook*. Majors must maintain a minimum cumulative GPA of 3.0. They must be formally admitted to English Education, a process that includes application and screening within the English Department as well as an application to the Teacher Certification Program in the College of Education. This screening involves review of the student's portfolio of written work and faculty evaluations as well as an interview with English Education faculty. Refer to the section "Admission to Teacher Education and Certification" in the College of Education and Educational Technology section of this catalog and the *English Education Handbook*.

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### Minor in English

To minor in English, 15 credits in English courses are required beyond the Liberal Studies requirement of ENGL 101, 121, and 202. Of these 15 credits, no more than 6 may be transferred to IUP from another university. Students who choose to minor in English should, if their major department concurs, substitute ENGL 122 for 121.

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### English Honors Program

The honors program is open by departmental permission to declared English majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in English courses. To determine how honors track courses will be integrated into existing requirements for the English major, students should consult their advisors or a member of the English honors track program (HTP) committee.

To apply, students must submit a letter of application, a list of English courses taken (with instructors' names), and a portfolio demonstrating high-quality work in English courses, to the HTP. To be accepted, students must receive favorable evaluations from a majority of professors of courses taken and portfolio approval by the HTP committee.

Students complete ENGL 480/H/ Distinction in English Seminar, HNRC 499, which fulfills the Liberal Studies Synthesis requirement, and 6 credits in any combination of the following: ENGL 483 (0-6 cr) and 0-6 credits of H-designated major courses, 3 credits of which must be upper level. Students must earn at least a grade of B in each course completed for the honors track.

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**Bachelor of Arts–English/Film Studies Track**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 3cr <b>Liberal Studies Electives:</b> 9cr, no courses with ENGL prefix	53
<b>College:</b> Foreign Language Intermediate Level (1)	0-6
<b>Major:</b> <b>Required Courses:</b> Two literary survey courses from the following: ENGL 210, 211, 212, 213, 226 One writing course from the following: ENGL 220, 221, 222 One language course from the following: ENGL 203, 313, 328 Capstone course: ENGL 484 One Film Studies required course: ENGL 208 <b>Controlled Electives:</b> (2, 3) Four Film Studies courses from the following: ENGL 332, 350, 440, 450, 460, 463 Two courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202	36
<b>Free Electives:</b>	25-31
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. (2) An internship, aside from counting for up to 6cr toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. internship director for advice about available openings. (3) Courses used to fulfill Core requirements cannot also be used to fulfill Track requirements.	

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**Bachelor of Arts–English/Language Studies Track**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 3cr <b>Liberal Studies Electives:</b> 9cr, no courses with ENGL prefix	53
<b>College:</b> Foreign Language Intermediate Level (1)	0-6
<b>Major:</b> <b>Required Courses:</b> Two literary survey courses from the following: ENGL 210, 211, 212, 213, 226 One writing course from the following: ENGL 220, 221, 222 One language course from the following: ENGL 313, 328 Capstone course: ENGL 484 One Language Studies required course: ENGL 203 <b>Controlled Electives:</b> (2, 3) Four Language Studies courses from the following: ENGL 313, 321, 328, 330, 333, 336, 426 Two courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202	36
<b>Free Electives:</b>	25-31
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. (2) An internship, aside from counting for up to 6cr toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. internship director for advice about available openings.	

(3) Courses used to fulfill Core requirements cannot also be used to fulfill Track requirements.

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**Bachelor of Arts–English/Literary, Textual, and Cultural Studies Track**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 3cr <b>Liberal Studies Electives:</b> 9cr, no courses with ENGL prefix	53
<b>College:</b> Foreign Language Intermediate Level (1)	0-6
<b>Major:</b> <b>Required Courses:</b> Two literary survey courses from the following: ENGL 210, 211, 212, 213, 226 One writing course from the following: ENGL 220, 221, 222 One language course from the following: ENGL 203, 313, 328 Capstone course: ENGL 484 One Literary, Textual, and Cultural Studies required course: ENGL 308 <b>Controlled Electives:</b> (2, 3) Four Literary, Textual, and Cultural Studies courses from the following: ENGL 210, 211, 212, 213, 225, 226, 265, 301, 302, 303, 304, 305, 306, 307, 315, 316, 317, 319, 335, 337, 338, 340, 341, 342, 343, 344, 348, 349, 350, 361, 354, 385, 386, 387, 396, 398, 430, 432, 434, 436, 437, 450, 461, 462, 463, 466 Two courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202	36
<b>Free Electives:</b>	25-31
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives. (2) An internship, aside from counting for up to 6cr toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. internship director for advice about available openings. (3) Courses used to fulfill Core requirements cannot also be used to fulfill Track requirements.	

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**Bachelor of Arts–English/Writing Studies Track**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 3cr <b>Liberal Studies Electives:</b> 9cr, no courses with ENGL prefix	53
<b>College:</b> Foreign Language Intermediate Level (1)	0-6
<b>Major:</b> <b>Required Courses:</b> Two literary survey courses from the following: ENGL 210, 211, 212, 213, 226 One writing course from the following: ENGL 220, 221, 222 One language course from the following: ENGL 203, 313, 328 Capstone course: ENGL 484 <b>Controlled Electives:</b> (2) Two courses from Craft and Genre: ENGL 220, 221, 222, 321, 325, 326, 327, 422, ENGL/THTR 347 One course from Forms and Theories: ENGL 308, 335, 340, 341, 342, 343, 450	36

Two courses from Studio/Portfolio/Career Preparation: ENGL 320, 420, 483, 493	6cr
Two courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202	6cr
<b>Free Electives:</b>	25-31
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.	
(2) An internship, aside from counting for up to 6cr toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. internship director for advice about available openings.	

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### Bachelor of Arts–English/Pre-Law Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 3cr <b>Liberal Studies Electives:</b> 9cr, no courses with ENGL prefix	53
<b>College:</b> Foreign Language Intermediate Level (1)	0-6
<b>Major:</b> <b>Required Courses:</b> Two literary survey courses from the following: ENGL 210, 211, 212, 213, 226 One writing course from the following: ENGL 220, 221, 222 One language course from the following: ENGL 203, 313, 328 Capstone course: ENGL 484 One English Studies/Pre-Law required course: ENGL 265 <b>Controlled Electives in English/Pre-Law:</b> (2, 3) Two courses in persuasion from the following: ENGL 310, 313, 321 One writing course from the following: ENGL 220, 221, 222, 325, 326, 327, 422 One course focusing on language, cultural power, and interpretation from the following: ENGL 225, 308, 336, 344, 348, 350, 385, 396, 450, 466 Two courses with ENGL prefix except ENGL 100, 101, 121, 122, or 202	36
<b>Other Requirements: Pre-Law Interdisciplinary Track</b> Seven courses, including at least one from each of six areas: <i>Business:</i> ACCT 201, ACCT 202, BLAW 235 <i>Criminology:</i> CRIM 210, 215, 255 <i>Economics:</i> ECON 121, 122, 332 <i>History:</i> HIST 320, 321, 346 <i>Philosophy:</i> PHIL 101, 110, 222, 450 <i>Political Science:</i> PLSC 358, 359, 361	3-21
<b>Free Electives:</b>	4-28
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.	
(2) An internship, aside from counting for 6cr toward the major, makes the B.A. degree recipient much more employable by providing job experience. Students should see the English B.A. Internship Director for advice about available openings.	
(3) Courses used to fulfill Core requirements cannot also be used to fulfill Track requirements.	

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### Bachelor of Science in Education–English Education (\*)

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-Literature:</b> ENGL 122 <b>Mathematics:</b> 6cr, MATH 101 or higher (1) <b>Natural Science:</b> Option I recommended (Option II also permitted but will exceed credit limit) <b>Social Science:</b> PSYC 101 <b>Liberal Studies Electives:</b> 0cr	48
<b>College:</b> Foreign Language Intermediate Level (2)	0-6
<b>College:</b>	29
<b>Preprofessional Education Sequence:</b> COMM 103 Digital Instructional Technology EDSP 102 Educational Psychology	3cr 3cr
<b>Professional Education Sequence:</b> EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures EDUC 242 Pre-Student Teaching Clinical Experience I EDUC 342 Pre-Student Teaching Clinical Experience II EDUC 441 Student Teaching EDUC 442 School Law EDUC 452 Teaching of English and Communication in the Secondary School	2cr 3cr 1cr 1cr 12cr 1cr 3cr
<b>Major:</b>	40
<b>Required Courses:</b> ENGL 212 American Literature: Beginnings to 1900 ENGL 220 Advanced Composition I ENGL 314 Speech and Communication in the Secondary English Classroom ENGL 318 Literature for Adolescents ENGL 323 Teaching Literature and Reading in the Secondary School ENGL 324 Teaching and Evaluating Writing ENGL 329 The History of the English Language ENGL 330 The Structure of English ENGL 426 ESL Methods and Materials ENGL 434 Shakespeare	3cr 3cr 3cr 3cr 3cr 3cr 3cr 3cr
<b>Controlled Electives:</b> (3) One Film Studies Track course One British Literature Survey course from ENGL 210 or 211 One Literary, Textual, and Cultural Studies Track course One general English elective (any Track)	3cr 3cr 3cr 3cr
<b>Total Degree Requirements:</b>	123
(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.	
(1) The second MATH course is a teacher certification requirement and counts as Liberal Studies credits for Mathematics.	
(2) If a student is able to be exempted from this requirement, an additional 6cr of free electives are necessary. Students with no previous foreign language background, or those who lack proficiency, will need to take the entry-level courses, which will increase the total number of credits required for the degree.	
(3) One of the controlled elective courses must be a non-western course; this requirement is separate from and in addition to the non-western Liberal Studies requirement.	



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## English Honors Track

12

**Prerequisites:** Declared major in English, completion of ENGL 101, 122, and 202; 15cr in the major, including at least two survey courses; and permission of English honors track program committee

**Required Courses:**

ENGL 480/H/ Distinction in English Seminar	3cr
HNRC 499 Honors Senior Synthesis	*cr (1)
6cr in any combination of the following options:	
ENGL 483/H/ Honors Thesis in English	0-6cr
Any H-designated English course	0-6cr (2)

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.
- (2) If 6cr of H-designated coursework is the option chosen, then one of those H-designated courses must be 300- or 400-level.

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## Department of Foreign Languages

**Website:** [www.iup.foreignlanguages](http://www.iup.foreignlanguages)

**Sean M. McDaniel, Chairperson;** Barton, Brooks, Dassier, Delbrugge, Glisan, Jurewicz, Liu, McCreary, Rodríguez, Ryan-Sams, Smith-Sherwood, Sullivan, Wallaert, Witthoef, Zambrano-Paff; and professors emeriti Drescher, Foltz, Henry, Jones, Mendizábal, Ready, Thornton, Whitmer

The Department of Foreign Languages offers a varied curriculum designed to provide not only basic language instruction but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience.

*In July 2010, the B.A. degree with majors in French for International Trade and German for International Trade were discontinued. Also in July 2010, the B.A. degree with majors in French and German and the B.S.Ed. with majors in French and German were placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

### French

For the French major, the department has two degree programs: the B.A. degree with a major in French and the B.S.Ed. degree with a major in French Education (K-12). *(Both of these programs are currently in moratorium.)*

Students majoring in French will acquire proficiency in all phases of language and enter more deeply into the history, culture, and literature of Francophone countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. French majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

### College Language Requirements

Students in the College of Humanities and Social Sciences must pass the intermediate sequence of a foreign language (in French, FRNC 201-202 or 203) or demonstrate that they have somehow acquired the equivalent proficiency level. Students from the other colleges may choose to take French (FRNC 201-202 or the accelerated 203) to fulfill a Liberal Studies elective. Any student who chooses French has an option to enroll in the traditional 3-credits-per-semester courses or the accelerated 6-credit track.

### Placement/Exemption

The student with no previous French study will take FRNC 101 (3cr) as a prerequisite. Students with previous French study will be placed into the appropriate course level by means of a written departmental exam administered in the summer for entering freshmen and during the first week of the semester for other students. No student judged to be a native speaker of French will be allowed to enroll in any course below the 300 level, with the exception of FRNC 254.

### Study Abroad—Nancy, France

IUP has established a study abroad center in Nancy, France. All majors are encouraged to participate in the Study Abroad Program, especially those seeking the International Trade degree. Students have an option to participate in a full-year or one-semester (spring) program. A six-week summer session has also been added to the options available. Nonmajors may be accepted into any of the programs and, unless they have advanced proficiency, must enter the language courses offered in the *Cours pour étrangers* (Courses for Foreign Students). All foreign program credits are evaluated by the department as transfer credits. For further information about cost and application procedures, contact the Foreign Languages Department.

### Internships

The Department of Foreign Languages, through contacts with certain French companies and through its affiliation with the ICN (*Institut Commercial de Nancy*), is able to place interns in Paris and other sites in France. The internship (generally 6 to 12 credits) is viewed as a highly desirable culminating experience following study in Nancy. For information, contact the department at least six months in advance.

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### Minor—French

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**Required Courses:**

FRNC 201	Intermediate French I	3cr
FRNC 202	Intermediate French II	3cr
FRNC 331	Intermediate French Conversation	3cr
FRNC 341	French Grammar	3cr
FRNC 353	Intermediate French Composition	3cr
FRNC 370	Introduction to French Literature	3cr

**Controlled Elective:**

One course from the following: FRNC 253, 373, 375, 376, 431, 432	3cr
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### German

For the German major, the department has two degree programs: the B.A. degree with a major in German and the B.S. in Education degree with a major in Secondary German Education. *(Both of these programs are currently in moratorium.)*

While majoring in German, students will acquire proficiency in all phases of the language and develop an understanding and appreciation of the history, culture, and literature of the German-speaking countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. German majors may look forward to rewarding careers in teaching, government, journalism, foreign trade, tourism, business, and librarianship.

### College Language Requirements

Students in the departments of the College of Humanities and Social Sciences must pass the intermediate sequence of a foreign language (GRMN 251 and 252) or demonstrate by the CLEP exam in German that they have acquired the equivalent proficiency level. Students from other colleges may elect to take two courses in German at the intermediate (III/IV) level toward fulfilling the requirement for Liberal Studies electives. Any student who chooses German can meet the requirement through enrollment in the traditional 3-credit courses or in the combined 6-credit courses.

### Study Abroad

The department encourages all students who study German at IUP to consider study abroad for one or two semesters. German majors are strongly urged to study two semesters or one academic year at a German university. To provide this opportunity at a relatively modest cost, the university has arranged an exchange of students between Duisburg University and IUP. By participating in this or other approved programs, students can earn from 12 to 14 credits per semester. For information, contact the office of the dean of the College of Humanities and Social Sciences.

### Minor in German

Students completing 18 credits beyond GRMN 152 will be recognized as having minored in German. Nine of the 12 credits must be taken at the 300 level with only 3 credits from the conversation sequence, GRMN 221, 222,

321, 322. This achievement will be noted on the student's transcript and thus provide more career flexibility.

## Spanish

The department offers a varied curriculum to provide not only basic language instruction in Spanish, but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the undergraduate Spanish major, the department has three degree programs: the B.S. in Education, the B.A. degree with a major in Spanish, and the B.A. degree with a major in Spanish for International Trade. The last degree program provides solid undergraduate degree training preparatory to an MBA in International Management.

Students majoring in Spanish will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Spanish-speaking countries. Spanish majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, criminology, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

### College Language Requirements

Students in the College of Humanities and Social Sciences, who must pass an intermediate-level language course requirement for graduation, may choose any one of the four languages offered by the Foreign Language departments: French, German, Italian, and Spanish. Those choosing the Spanish option will fulfill the requirement by successfully completing SPAN 201 or 211\*. The student with no previous foreign language study will take SPAN 101-102 or 111\* as a prerequisite; the credits will not be applicable to any college or department requirements (except for students in Hospitality Management, who may fulfill their 3-9-credit language requirement with SPAN 111\* or 211\* or 131-132 or with two 4-credit courses) but may be counted as general electives in the total required for graduation. Students in the other colleges may choose to take one of the languages offered (at the intermediate level) in fulfilling the requirements of Liberal Studies electives. \*Course is currently inactive.

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered prior to the beginning of the semester. In addition, as deemed necessary, especially in the case of native or heritage speakers, students' writing and speaking proficiency will be assessed by one or more faculty members in the Department of Foreign Languages. Each student's individual requirements and the judgment of the classroom instructors will also be considered in placement. No student will be allowed to register for or take a D/F repeat in SPAN 101, 102, or 201 when credit has already been received for a higher-numbered course.

Incoming students may receive course credit for their oral proficiency levels in Spanish through the American Council on Education (ACE) Credit Recommendation Service and Language Testing International (LTI), the assessment agency for the American Council on the Teaching of Foreign Languages (ACTFL). Students who have taken an ACTFL Oral Proficiency Interview (OPI) through LTI, received a proficiency rating by LTI, and received credit recommendation by ACE may receive the following course credits in Spanish at IUP:

ACTFL Oral Proficiency Ratings (rated by LTI)	ACE Credit Recommendations	IUP Spanish Course Equivalencies
Intermediate-Mid	4 Lower Division credits	Either SPAN 102 or 201, depending on placement on departmental written exam
Intermediate-High/ Advanced Low	8 Lower Division credits	SPAN 201 and 220

Advanced-Mid	10 Lower Division credits	SPAN 201 and 220 and 350
Advanced High/ Superior	10 Lower Division credits and 2 Upper Division credits	SPAN 201 and 220 and 350 and 450

To begin the process, students must contact LTI by e-mail ([testing@languagetesting.com](mailto:testing@languagetesting.com)) to request an ACE College Credit Recommendation by OPI Examination information package and application. There is a fee for the OPI and an ACE application fee.

### Spanish for Elementary Education Majors

Elementary Education majors may earn a minor in Spanish for Elementary Teaching which will prepare them to teach in elementary programs in which content teaching in the Spanish language is the objective. To complete this minor students must: 1) attain a minimum level of Intermediate-High in Spanish on the ACTFL/ETS oral proficiency scale the semester prior to Student Teaching;\* 2) successfully complete a six-week summer study abroad experience with IUP's Mexico Summer Study Abroad Program\*\* (usually the summer following the junior year); 3) successfully complete the student teaching experience in a bilingual or partial immersion elementary school classroom; and 4) complete the minimum number of credits required for the minor.

\*The placement proficiency level may vary, depending on student teacher placement; see advisor.

\*\*Other program options may be available for Elementary Education students pending consultation with advisor.

### Spanish Honors Program

The honors program is open by departmental permission to Spanish and Spanish Education K-12 majors with a minimum 3.25 cumulative GPA and a 3.25 GPA in Spanish courses.

To apply, students must submit two letters of reference from department faculty members and a two-page self-statement describing the student's academic and career goals.

Students complete two semesters of SPAN 483/H, CHSS 489 (a multi-disciplinary colloquium emphasizing problem-solving, discussion, reading, and writing on a topic or theme), and one course from SPAN 410-431. Students must earn at least a grade of B in each course completed for the track. To determine how honors track courses will be integrated into existing requirements for the Spanish or Spanish Education K-12 major, students should consult their advisors.

### Study Abroad and Internships

**Study Abroad:** The university has established study-abroad centers in Spain, Mexico, and Costa Rica. The program in Valladolid, Spain, is a second-semester-only program, whereas the ones in Mexico and Costa Rica are summer programs. All majors are required to participate in study abroad; nonmajors are also accepted into these programs. The 18 credits in Spain, 7 credits in Mexico, or 4 credits in Costa Rica are applicable, all or in part, to a major or a minor in Spanish. Students interested in more information should contact the department.

**Internships:** Internships in Spain, Mexico, and Costa Rica are available through the department. Internships take place during the summer and vary from six weeks to two months in duration. Internship is a credit-bearing course, SPAN 493, and all interns are enrolled in the first session of summer school. Noncredit internships cannot be considered. Students enrolled in the Spanish for International Trade program are strongly urged to do an internship in order to gain credibility in the field of international business. Internships are available in banking, government, social work, communications, education, marketing, and many other fields. Arranging an internship abroad takes considerable long-range planning, and anyone interested should contact the department at least three months in advance.

## Bachelor of Arts–Spanish

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: 53

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with SPAN prefix

### College:

Foreign Language (included in major) 0

### Major:

Study Abroad (1) 37

### Required Courses:

SPAN 201 Intermediate Spanish or equivalent 4cr

SPAN 220 Intermediate Spanish Conversation 3cr

SPAN 230 Intermediate Spanish Composition and Grammar 3cr

SPAN 260 Introduction to Hispanic Literature 3cr

SPAN 340 Hispanic Civilization Through the Nineteenth Century 3cr

SPAN 342/ Twentieth-Century Spanish Civilization  
SPAN 344 and Culture/Twentieth-Century Spanish-American Civilization and Culture 3cr

SPAN 350 Advanced Spanish Conversation 3cr

SPAN 362/ Survey of Peninsular Literature/  
SPAN 364 Survey of Spanish American Literature 3cr

SPAN 404 Advanced Spanish Grammar 3cr

### Controlled Electives:

At least two literature courses from those numbered 410-481 6cr

Any other 3cr in SPAN courses 342 or above except SPAN 390 3cr

**Free Electives:** 30

**Total Degree Requirements:** 120

- (1) Students must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more credits extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP's study abroad programs in Spain, Mexico, or Costa Rica or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Requests for exemptions to this requirement must be initiated by the student in writing and submitted to the department chair.

## Bachelor of Arts–Spanish for International Trade

**Liberal Studies:** As outlined in Liberal Studies section with following specifications: 52

**Mathematics:** MATH 115

**Social Science:** ECON 121, PSYC 101

**Liberal Studies Electives:** 6cr, BTED/COSC/IFMG 101, MATH 214, no course with SPAN prefix

### College:

Foreign Language (included in major) 0

### Major:

Study Abroad (1) 30

### Required Courses:

SPAN 222 Intermediate Spanish Conversation and Grammar-Business 3cr

SPAN 230 Intermediate Spanish Composition and Grammar 3cr

SPAN 260 Introduction to Hispanic Literature 3cr

SPAN 340 Hispanic Civilization Through the Nineteenth Century 3cr

SPAN 344 Twentieth-Century Spanish-American Civilization and Culture 3cr

SPAN 350 Advanced Spanish Conversation 3cr

SPAN 354 Commercial Spanish 3cr

SPAN 402 Translation and Interpretation 3cr

SPAN 404 Advanced Spanish Grammar 3cr

**Controlled Electives:** Any 3 Spanish credits in courses 362 or above except SPAN 390 3cr

**Other Requirements: Business Sequence** 36

ACCT 201 Accounting Principles I 3cr

ACCT 202 Accounting Principles II 3cr

BLAW 235 Legal Environment of Business 3cr

BTST 321 Business and Interpersonal Communications 3cr

ECON 122 Principles of Microeconomics 3cr

FIN 310 Fundamentals of Finance 3cr

IFMG 300 Information Systems: Theory and Practice 3cr

MGMT 310 Principles of Management 3cr

MGMT 330 Production and Operations Management 3cr

MGMT 495 Business Policy 3cr

MKTG 320 Principles of Marketing 3cr

QBUS 215 Business Statistics 3cr

**Free Electives:** 2

**Total Degree Requirements:** 120

- (1) Students must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more cr extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP's study abroad programs in Spain, Mexico, or Costa Rica or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Requests for exemptions to this requirement must be initiated by the student in writing and submitted to the department chair.

## Bachelor of Science in Education–Spanish Education K-12

The following additional requirements for Spanish Education K-12 in the Admission to Teacher Education and Certification Process are required. Please see the remainder of the requirements for all B.S. Education majors in the "3-Step Process for Teacher Education" in the College of Education and Educational Technology section of this catalog.

### Mid-Program Review

During the semester in which students complete EDUC 242 with a "C" or better (and have a minimum of 60 credits), they must meet the following departmental requirements:

1. Successfully complete an essay in English (Topic: Foreign Language Education). Students read a recent article dealing with innovations in teaching and are asked to respond to certain issues in light of their coursework and clinical experience while attending IUP.
2. Demonstrate Intermediate-Mid or higher level of oral proficiency in Spanish in a departmental/advisory individual Oral Proficiency Interview (ACTFL).
3. Satisfactorily complete an interview in English with the Spanish Education Coordinator, a second faculty member from the Department of Foreign Languages, and one cooperating teacher in order to assess their ability to interact with others on a professional level.
4. Have a minimum GPA in Spanish coursework of 3.0.

### Admission to Student Teaching

1. Demonstrate Advanced-Low or higher level of oral proficiency in Spanish in an individual Oral Proficiency Interview (ACTFL)—to be completed instead of the Praxis II Spanish: Content Knowledge Exam.
2. Demonstrate Advanced-Low or higher level of written proficiency in Spanish in an individual Writing Proficiency Test (ACTFL)—to be completed instead of the Praxis II Spanish: Content Knowledge Exam.
3. Have a minimum GPA in Spanish coursework of 3.0.
4. Earn a grade of C or higher in SPAN 404 and 453.

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**Bachelor of Science in Education—Spanish Education K-12 (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** 3cr, MATH 101 or higher

**Social Science:** ANTH 110, PSYC 101

**Liberal Studies Electives:** 9cr, MATH course (1), no courses with SPAN prefix

**College:****Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology 3cr  
EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr  
EDEX 323 Instruction of English Language Learners with Special Needs 2cr  
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr  
EDUC 242 Pre-Student Teaching Clinical Experience I 1cr  
EDUC 342 Pre-Student Teaching Clinical Experience II 1cr  
EDUC 441 Student Teaching 12cr  
EDUC 442 School Law 1cr  
EDUC 453 Teaching of Foreign Languages in the Secondary School 3cr

**Major:**

Study Abroad (2) 37

**Required Courses:**

SPAN 201 Intermediate Spanish or equivalent 4cr  
SPAN 220 Intermediate Spanish Conversation 3cr  
SPAN 230 Intermediate Spanish Composition and Grammar 3cr  
SPAN 260 Introduction to Hispanic Literature 3cr  
SPAN 340 Hispanic Civilization Through the Nineteenth Century 3cr  
SPAN 342/ Twentieth-Century Spanish Civilization and Culture/Twentieth-Century Spanish-American Civilization and Culture 3cr  
SPAN 344  
SPAN 350 Advanced Spanish Conversation 3cr  
SPAN 390 Teaching of Elementary Content Through the Spanish Language 3cr  
SPAN 404 Advanced Spanish Grammar 3cr  
SPAN 453 Spanish Phonetics and Phonemics 3cr

**Controlled Electives:**

Any other 3cr from SPAN 300 or above 3cr  
SPAN 362, 364, or a 400-level literature course 3cr

**Total Degree Requirements:**

121

(\*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.

(1) Students who do not wish to select a MATH course under the Liberal Studies Electives must still take a second MATH course (101 or higher) in order to fulfill the state requirements.

(2) Students must successfully complete a program of language study in a Spanish-speaking country. This program must, as a minimum, last four weeks and carry 3 or more cr extending beyond the intermediate level. Students may fulfill this requirement by participating in any of IUP’s study abroad programs in Spain, Mexico, or Costa Rica or by transferring credits from another accredited program. Students wishing to fulfill this requirement through a non-IUP program should obtain prior approval from the department. Requests for exemptions to this requirement must be initiated by the student in writing and submitted to the department chair.

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**Minor—Spanish****22****Required Courses:**

SPAN 201 Intermediate Spanish or equivalent 4cr  
SPAN 220 Intermediate Spanish Conversation 3cr  
SPAN 230 Intermediate Spanish Composition and Grammar 3cr  
SPAN 260 Introduction to Hispanic Literature 3cr  
SPAN 342/ Twentieth-Century Spanish Civilization and Culture/Twentieth-Century Spanish-American Civilization and Culture 3cr  
SPAN 344  
SPAN 350 Advanced Spanish Conversation 3cr

**Controlled Electives:**

One course from the following:

SPAN 340, 342, 344, 362, 364, 453 3cr

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**Spanish Honors Track****12cr****Required Courses:**

CHSS 489/H/ Honors Colloquium 3cr  
SPAN 410-431 One course in Spanish Literature 3cr  
SPAN 483/H/ Honors Thesis in Spanish 6cr

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**Minor—Spanish for Elementary Teaching****21-25****Required Courses:**

SPAN 201 Intermediate Spanish or equivalent 0-4cr  
SPAN 220 Intermediate Spanish Conversation 3cr  
SPAN 230 Intermediate Spanish Composition and Grammar 3cr  
SPAN 244 Modern Mexico (taken in Mexico) 3cr  
SPAN 290 Spanish for Elementary Teaching 3cr  
SPAN 350 Advanced Spanish Conversation 3cr  
SPAN 390 Teaching of Elementary Content Through the Spanish Language 3cr

**Controlled Electives:**

One course from the following: SPAN 260, 340, 344, 404, 453 3cr

**Other requirements:**

Study abroad experience in the IUP-Mexico Summer Study Abroad Program (6 weeks) (1)

Student teaching experience in a bilingual or partial immersion elementary classroom

Students interested in the program should contact the advisor of the Spanish for Elementary Teaching minor in the department. Students may declare only one of the two minor programs offered by the department.

(1) Other program options may be available for Elementary Education students pending consultation with advisor.

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**Department of Geography and Regional Planning**

**Website:** [www.iup.edu/geography](http://www.iup.edu/geography)

**John E. Benhart, Jr., Chairperson;** Begg, Benclowski, Buckwalter, Hoch, Masilela, Okey, Patrick, G. Sechrist, R. Sechrist, Watts; and professors emeriti Forbes, Miller, Shirey, Tepper, Weber

The Department of Geography and Regional Planning offers three separate degree programs for the geographer, planner, and teacher.

Geography has several traditions of study. Two of the more important traditions are the study of relationships between humans and environment, or the ecological tradition, and the study of spatial organization, which involves the way people use space on the earth’s surface. In both traditions the focus is on understanding regions of the world and the interactions with-

in and between them. Geographers make important contributions to the understanding of all aspects of humankind's use of and impact on the earth's surface.

The focus of the Bachelor of Science in Regional Planning is to prepare students for eventual leadership positions as professional planners. A broad range of technical skills, land use, and environmental training prepare our students for public or private service as spatial and physical planners.

The geography track in social studies education offers a geography major equivalent for the student interested in teaching at the junior or senior high levels. The Pennsylvania certification will be in citizenship. New education requirements instituted for the commonwealth specify that geography be taught at all levels in Pennsylvania. Nationally, geography is one of the core subject areas named in the National Education Goals program.

Geography and Regional Planning are in the same department, because "Planning is the art of which geography is the science." Employment opportunities for geographers and regional planners are excellent. Geography and planning occupations have been identified among the fastest-growing job fields by *U.S. News and World Report*. Alumni occupy a wide variety of positions in government, business, industry, planning, and education. Environmental, locational, and spatial knowledge gained in the department's programs provides skills desperately needed in today's job market. Students interested in additional career information should visit the departmental office in Room 10, Leonard Hall or the website [www.iup.edu/geography](http://www.iup.edu/geography).

Three degree programs are offered by the department: Bachelor of Arts degree with a major in Geography, Bachelor of Science degree with a major in Regional Planning, and Bachelor of Science in Education degree with a major in Social Studies Education/Geography Track.

In addition to the geography core (GEOG), there are four tracks for specific geographic competencies: GIS/Cartographer, Environmental Geographer, Economic Geographer, and General Geographer. The regional planning (RGPL) major offers specific career opportunities in four somewhat parallel tracks: GIS/Cartographer, Environmental Planner, Economic Developer, and Town Manager.

A minor in geography or regional planning is appropriate for majors in all other fields of the natural and social sciences. Students in marketing and information systems will find a minor in either field relevant. A minor consists of 15 credits in GEOG or RGPL courses. The department suggests students take the core in either program if graduate study is anticipated.

Department resources, which include the James E. Payne GIS/Cartography Laboratory and the new Spatial Environmental Analysis Laboratory, offer access to advanced geographic analysis equipment and resources. The fully equipped laboratories house fifty workstations, large-format plotters, Global Positioning System units, and water and atmospheric monitoring devices. The most heavily used software includes ARC/INFO, ArcView, MapInfo, Atlas\*GIS, IDRISI, AutoCad, and MiniCad. Geographic Information Systems, image processing, and computer-aided drafting software includes the Arc GIS software suite, MapInfo, IDRISI, MicroMSI, as well as MiniCad and VectorWorks.

The department also houses the Census Documents and Data Library, coordinated by departmental faculty. In conjunction with Stapleton Library, holdings include population/housing/socioeconomic/mapping database CDs and other publications used for teaching, research, and planning in community service and local and county governments. The department is also an affiliate of the Bureau of Economic Analysis at the Census Bureau and a repository for USGS digital data.

A strong internship program directed by Dr. Brian Okey offers placement in industry, engineering, conservation, land management, and planning agencies at the local, state, and federal levels.

Specific core requirements in Geography and Regional Planning offer a structured approach for majors. Appropriate subfields or tracks are available in both programs to prepare students for graduate work and to support different career options for majors. There are four tracks for the geography major and four tracks for the regional planning major.

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### **Geography—General Geography Track**

The General Geography Track encourages the major to sample courses from different subfields of the discipline. This track prepares the major for graduate work in geography and related fields of employment. Job options include report writing, research analysis, and data gathering. In government employment, the State Department, Department of Commerce, and the Census Bureau are significant places for geography skills.

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### **Geography—Geographic Information Systems and Cartographer Track**

The Geographic Information Systems and Cartographer Track prepares students for employment as geographic information specialists, facilities managers, cartographers, and remote sensing specialists. Coursework includes methods for identifying, modeling, and analyzing the spatial organization of human and environmental systems from both practical and theoretical perspectives. Data collection, spatial information management, and graphic presentation are integral skills taught in the program. Such skills could be and are used in coursework for the analysis of wildlife habitat, facilities management, land use planning and site design, and transportation systems design and maintenance.

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### **Geography—Economic Geographer Track**

The Economic Track provides a broad framework of ideas and theories in addition to a task-oriented approach to location analysis. Economic geographers analyze community and regional requirements for economic space, the demands for convenient transport, and the role of private enterprise. This interrelated group of courses is useful to students, because economic geographers are expected to analyze the interactions of concepts and variables. Market analysis for the location of new shopping centers, for example, requires understanding of economic principles, population characteristics, and the local political milieu, all in a spatial context.

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### **Geography—Environmental Geographer Track**

The Environmental Geographer Track is designed to prepare majors in geography for careers in environmental fields or graduate study that leads to a variety of environmental careers. Students who elect this track acquire knowledge of the physical and human processes that shape the environment, strategies for analyzing environmental issues, and concepts that underlie strategies for ameliorating environmental problems. They understand the definition and delineation of flood plains and wetlands and the definition, delineation, and threats to biomes. The skills acquired in this track enable students to assess the causes, consequences, and solutions to a wide variety of environmental issues such as water pollution, acid rain, watershed management, or deforestation.

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### **Regional Planning—Land Use Planning and Geographic Information Systems Track**

The Land Use Planning and Geographic Information Systems Track prepares students for employment as professional planners adept at applying advanced techniques to the development of livable communities. Data collection, spatial information management, and graphic presentation are integral skills taught in the program. Coursework also equips students for facilities planning and management, remote sensing applications in planning, and site location analysis. Coursework includes methods for identifying, modeling, and analyzing the spatial organization of community systems from both practical and theoretical perspectives. Students in planning graduate with a working knowledge of subdivision, land use, and zoning regulation. They are familiar with strategies of economic development. They understand both the theory and ethics of planning. Students completing this track should be able to assist diverse communities and organizations in identifying and finding solutions to a wide variety of land use, siting, and transportation problems.

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### **Regional Planning—Environmental Planner Track**

The Environmental Track is designed to prepare majors in regional planning for careers as environmental planners or further graduate studies. Students who select this track learn about aspects of the natural environment, methods to preserve and conserve resources, and how to plan communities where humans both benefit from the natural environment and have mini-

mal impact upon it. They are knowledgeable about environmental regulation and policy. They understand community strategies for ameliorating environmental problems and have both a theoretical and working knowledge of subdivision, land use, and zoning regulation. They are familiar with the regulation and management of flood plains and wetlands, the management of waste and storm water, and environmental impact assessment. They understand both the theory and ethics of planning. Students completing this track should be able to assist diverse communities and organizations in identifying and finding solutions to a wide variety of environmental issues such as waste water treatment, water pollution, acid rain, watershed planning, carbon footprints, deforestation, and natural resource extraction.

### Geography and Regional Planning Honors Programs

The honors program is open by departmental permission to Geography and Regional Planning majors with at least a 3.25 GPA in total university coursework and a 3.25 GPA in Geography or Regional Planning courses. After completing 60 credits, all qualified majors will be invited to join the Geography or Regional Planning Honors Track. Social Studies Education–Geography Track majors are encouraged to participate, with the realization that participation will require more than 120 credits.

Students complete CHSS 489, a multidisciplinary colloquium emphasizing problem-solving, discussion, reading, and writing on a topic or theme; GEOG 483 or RGPL 483; and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. Students must maintain a 3.0 GPA in the track. To determine how Honors Track courses will be integrated into existing requirements for the Geography or Regional Planning major, students should consult their academic advisors.

To apply, students must submit a letter of intent that includes a two-page self-statement describing the student's academic and career goals. Two Geography and Regional Planning faculty members must endorse the student's application.

### Bachelor of Arts–Geography/General Geography Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-56

**Mathematics:** MATH 217 or 6cr of MATH courses

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101 recommended; no courses with GEOG prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:** 42

**Required Courses:**

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 231	Economic Geography	3cr
GEOG 341	Climatology	3cr
GEOG 342	Physiography	3cr
GEOG 411	History of Geography	3cr
GEOG 412	Research Seminar	3cr
RGPL 350	Introduction to Planning	3cr

**Controlled Electives:**

One course from GEOG 251-257	3cr
Five courses (15cr) from any GEOG courses (only one GEOG 100-level course permitted)	15cr

**Free Electives:** 16-25

GEOG 493	Internship (strongly recommended)	3cr
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**Total Degree Requirements:** 120

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts–Geography/GIS and Cartographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-56

**Mathematics:** MATH 217 or 6cr of MATH courses

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG101 recommended; no courses with GEOG prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:** 42

**Required Courses:**

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 231	Economic Geography	3cr
GEOG 341	Climatology	3cr
GEOG 342	Physiography	3cr
GEOG 411	History of Geography	3cr
GEOG 412	Research Seminar	3cr
RGPL 350	Introduction to Planning	3cr

**Controlled Electives:**

One course from GEOG 251-257 3cr

**Track Courses:** Five courses from the following:

GEOG 313	Cartography II	3cr
GEOG 314	Map and Photograph Interpretation	3cr
GEOG 316	Introduction to Geographic Information Systems	3cr
GEOG 415	Remote Sensing	3cr
GEOG 417	Technical Issues in GIS	3cr
GEOG 421	Enterprise GIS Management	3cr
GEOG 425	GPS Concepts and Techniques	3cr

**Free Electives:** 16-25

GEOG 493	Internship (strongly recommended)	3cr
RGPL 453	Planning Design Studio I (recommended)	3cr
RGPL 454	Planning Design Studio II (recommended)	3cr

**Total Degree Requirements:** 120

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts–Geography/Economic Geographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-56

**Mathematics:** MATH 217 or 6cr of MATH courses

**Social Science:** ECON 121

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101 recommended; no courses with GEOG prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:** 42

**Required Courses:**

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 231	Economic Geography	3cr
GEOG 341	Climatology	3cr
GEOG 342	Physiography	3cr
GEOG 411	History of Geography	3cr
GEOG 412	Research Seminar	3cr
RGPL 350	Introduction to Planning	3cr

**Controlled Electives:**

One course from GEOG 251-257 3cr

**Track Courses:** Five courses from the following:

GEOG 331	Population Geography	3cr
GEOG 332	Urban Geography	3cr
GEOG 333	Trade and Transportation	3cr

GEOG 334	Political Geography	3cr
GEOG 336	Social Geography	3cr
GEOG 464	Land Use Policy	3cr
<b>Free Electives:</b>		16-25
ECON 383	Urban/Regional Economics (recommended)	3cr
GEOG 493	Internship (strongly recommended)	3cr
RGPL 458	Land Use Law (recommended)	3cr

**Total Degree Requirements:** 120

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Bachelor of Arts–Geography/Environmental Geographer Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-56

**Mathematics:** MATH 217 or 6cr of MATH courses

**Natural Science:** BIOL 103-104 or GEOS 101-102 and GEOS 103-104 recommended

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101 recommended; no courses with GEOG prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:**

42

**Required Courses:**

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 231	Economic Geography	3cr
GEOG 341	Climatology	3cr
GEOG 342	Physiography	3cr
GEOG 411	History of Geography	3cr
GEOG 412	Research Seminar	3cr
RGPL 350	Introduction to Planning	3cr

**Controlled Electives:**

One course from GEOG 251-257 3cr

**Track Courses:** Five courses from the following:

GEOG 314	Map and Photograph Interpretation	3cr
GEOG 316	Introduction to Geographic Information Systems	3cr
GEOG 335	Geography of Energy	3cr
GEOG 343	Geography of Fresh Water Resources	3cr
GEOG 345	Biogeography for Environmental Managers	3cr
GEOG 415	Remote Sensing	3cr
GEOG 425	GPS Concepts and Techniques	3cr
GEOG 440	Conservation: Environmental Analysis	3cr

**Free Electives:**

BIOL 210	Botany (recommended)	3cr
BIOL 362	Ecology (recommended)	3cr
GEOG 493	Internship (strongly recommended)	3cr
GEOS 201	Foundations of Geology (recommended)	3cr
GEOS 202	Quantitative Methods in the Geosciences (recommended)	3cr
RGPL 458	Land Use Law (recommended)	3cr
RGPL 464	Land Use Policy (recommended)	3cr

**Total Degree Requirements:** 120

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

### Geography Honors Track 12

**Prerequisites:** Declared major in Geography, completion of at least 60cr, and endorsement of two Geography faculty members

**Required Courses:**

CHSS 489/H/	Honors Colloquium	3cr
HNRC 499	Honors Senior Synthesis	*cr (1)
GEOG 483/H/	Honors Thesis in Geography	6cr (2)

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.
- (2) Credits for GEOG 483 are counted in the appropriate Departmental Track requirement.

### Bachelor of Science–Regional Planning/Land Use Planning and GIS Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217 recommended

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG 101 recommended, no courses with RGPL prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:**

51

**Required Courses in Planning:**

RGPL 213	Cartography I	3cr
RGPL 316	Introduction to Geographic Information Systems	3cr
RGPL 332	Urban Geography	3cr
RGPL 350	Introduction to Planning	3cr
RGPL 352	Planning Methods	3cr
RGPL 410	Community Participation and Civic Engagement Seminar	3cr
RGPL 412	Community Planning Practicum	3cr
RGPL 453	Planning Design Studio I	3cr
RGPL 454	Planning Design Studio II	3cr
RGPL 458	Land Use Law	3cr
RGPL 464	Land Use Policy	3cr
RGPL 468	Planning Theory	3cr
RGPL 493	Internship	3cr

**Track Courses:** Four courses from the following:

GEOG 334	Political Geography	3cr
PLSC 376	Public Sector Budgeting and Financial Management	3cr
RGPL 313	Cartography II	3cr
RGPL 314	Map and Photograph Interpretation	3cr
RGPL 415	Remote Sensing	3cr
RGPL 417	Technical Issues in GIS	3cr

**Free Electives:** 10-16

**Total Degree Requirements:** (2) 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) As they pass through the program, students will be expected to develop and maintain a portfolio of planning coursework as a requirement for graduation.

### Bachelor of Science–Regional Planning/Environmental Planner Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217 recommended

**Natural Science:** BIOL 103-104 recommended

**Liberal Studies Electives:** 9cr, BTED/COSC/IFMG101 recommended, no courses with RGPL prefix

**College:**

Foreign Language Intermediate Level (1) 0-6

**Major:**

54

**Required Courses in Planning:**

RGPL 213	Cartography I	3cr
RGPL 316	Introduction to Geographic Information Systems	3cr

RGPL 332	Urban Geography	3cr
RGPL 350	Introduction to Planning	3cr
RGPL 352	Planning Methods	3cr
RGPL 410	Community Participation and Civic Engagement Seminar	3cr
RGPL 412	Community Planning Practicum	3cr
RGPL 426	Environmental Land Use Planning	3cr
RGPL 453	Planning Design Studio I	3cr
RGPL 454	Planning Design Studio II	3cr
RGPL 458	Land Use Law	3cr
RGPL 464	Land Use Policy	3cr
RGPL 468	Planning Theory	3cr
RGPL 493	Internship	3cr
<b>Track Courses:</b> Four courses from the following:		
GEOG 335	Geography of Energy	3cr
RGPL 314	Map and Photograph Interpretation	3cr
RGPL 341	Climatology	3cr
RGPL 342	Physiography	3cr
RGPL 343	Geography of Fresh Water Resources	3cr
RGPL 345	Biogeography for Environmental Managers	3cr
RGPL 415	Remote Sensing	3cr
RGPL 440	Conservation: Environmental Analysis	3cr
<b>Free Electives:</b>		7-13
PLSC 376 strongly recommended and BIOL 114 recommended		
<b>Total Degree Requirements: (2)</b>		120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.		
(2) As they pass through the program, students will be expected to develop and maintain a portfolio of planning coursework as a requirement for graduation.		

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### Regional Planning Honors Track 12

**Prerequisites:** Declared major in Regional Planning, completion of at least 60cr, and endorsement of two Regional Planning faculty members

**Required Courses:**

CHSS 489/H/	Honors Colloquium	3cr
HNRC 499	Honors Senior Synthesis	*cr (1)
RGPL 483/H/	Honors Thesis in Regional Planning	6cr (2)

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.
- (2) Credits for RGPL 483 are counted in the appropriate Departmental Track requirement.

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### Bachelor of Science in Education–Social Studies Education/ Geography Track (\*) 48

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:

**Humanities-History:** fulfilled by required courses in major

**Mathematics:** 6cr

**Social Science:** ECON 121, GEOG 102, PSYC 101

**Liberal Studies Electives:** 3cr, ECON 122, no courses with GEOG prefix

**College:** 32

**Preprofessional Education Sequence:**

COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Professional Education Sequence:**

CHSS 342	Social Studies Teaching Lab	1cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr

EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 441	Student Teaching	12cr
EDUC 442	School Law	1cr
EDUC 455	Teaching of Social Studies in Secondary Schools	3cr

**Major:** 21

**Required Courses:**

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 411	History of Geography	3cr

**Controlled Electives:**

At least two courses from each of the following two groups: 12cr

*Environmental Geography:* GEOG 341, 342, 343, 345, 440

*Regional Geography:* GEOG 251, 252, 253, 254, 255, 256, 257 (1)

**Social Science Distribution Requirements:** 21

HIST 201	Western Civilization Before 1600 (1)	3cr
HIST 202	Western Civilization Since 1600 (1)	3cr
HIST 204	United States History to 1877	3cr
HIST 205	United States History Since 1877	3cr
PLSC 111	American Politics	3cr
PLSC 280	Comparative Government I: Western Political Systems	3cr
PLSC 285	Comparative Government II: Non-Western Political Systems	3cr
SOC 231	Contemporary Social Problems	3cr

**Free Elective:** 1

**Total Degree Requirements:** 123

(\*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog. In order to student teach, students must have a 3.0 cumulative GPA in their major (social science and geography courses). To be licensed to teach Geography, Education majors must apply for Social Studies Education certification.

- (1) GEOG 104 may count as a regional course if a student took the course before entering the track.

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## Department of History

**Website:** [www.iup.edu/history](http://www.iup.edu/history)

**R. Scott Moore, Chairperson;** Arpaia, Bailey, Baumler, Bodle, Botelho, Finegan, Franklin-Rahkonen, Lippert, Lu, Mannard, Mazak-Kahne, Ricketts, Schroeder, Wang, Whited; and professors emeriti Cashdollar, Cord, Fricke, Gallanar, Goodrich, Hatfield, Landon, Lerner, Lehman, Marcus, Mastro, Miller, Oliver, Rife, Smith, Vogel, Wiley

Programs in history are designed to give students an opportunity to study in some depth the past story of peoples and their world. Degrees offered by the History Department are the Bachelor of Arts degree with a major in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The social studies education program prepares students to teach at the junior- and senior-high school levels.

The history student will find that the program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for public history positions, and for teaching. Not only the story of the people of the United States but also that of other peoples is covered, in the belief that global historical understanding is essential for the future of civilization.

Requirements for the degree of Bachelor of Arts degree with a major in History are 36 credits in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on history, are a minimum of 27 credits in history within the 54 credits required for social studies certification. To minor in history, 15 credits of courses with an HIST prefix are required, with at least 3 credits taken at the 300 or higher level. No more than 6 credits may be transferred to IUP from another university. For majors in history programs, courses in history in Liberal Studies are applicable only if numbered 300 or higher. All pro-



grams should be planned with an advisor. Every major and concentrate in history will be advised by History department faculty members.

Admission to HIST 482 and 483, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study abroad programs, and other activities should be investigated by every history student. The department is committed to the ideal of a broad liberal arts education.

### Bachelor of Arts–History

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Humanities–History:** fulfilled by required courses in major

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with HIST prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 36

**Required Course:**

HIST 200 Introduction to History 3cr

**Controlled Electives:**

At least three foundation courses from the following: (2) 9cr

HIST 201 Western Civilization Before 1600

HIST 202 Western Civilization Since 1600

HIST 204 United States History to 1877

HIST 205 United States History Since 1877

HIST 206 History of East Asia

HIST 208 Survey of Latin American History

Two courses from HIST 401-404 (Topics) (3) 6cr

One Non-Western HIST course: Latin America, Africa, 3cr

Asia, Middle East, or Russia, 300 or 400 level

Five additional history courses (4) 15cr

**Free Electives:** 28-34

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) No more than 12cr in foundation courses may be counted towards the major.
- (3) This requirement may also be fulfilled by completing one Topics course and either the departmental honors program or a graduate seminar with a concluding paper. Students taking two Topics courses must take two with different numbers.
- (4) Courses selected from 300- and 400-level offerings; no more than 6cr from HIST 493 as major elective. Students who have taken three foundation courses must take at least six 300-400 level HIST courses in addition to Topics courses. Those with four foundation courses need take only five 300-400 level HIST courses in addition to Topics courses.

### Bachelor of Arts–History/Pre-Law Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Humanities–History:** fulfilled by required courses in major

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with HIST prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 33

**Required Course:**

HIST 200 Introduction to History 3cr

**Controlled Electives:**

At least three foundation courses from the following: (2) 9cr

HIST 201 Western Civilization Before 1600

HIST 202 Western Civilization Since 1600

HIST 204 United States History to 1877

HIST 205 United States History Since 1877

HIST 206 History of East Asia

HIST 208 Survey of Latin American History

One course from HIST 401-404 (Topics) (3) 3cr

One Non-Western HIST course: Latin America, Africa, 3cr

Asia, Middle East, or Russia, 300 or 400 level

Five additional history courses (4) 15cr

**Other Requirements: Pre-Law Interdisciplinary Track** 12-21

Seven courses, including at least one from each of six areas:

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 255

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*Philosophy:* PHIL 101, 110, 222, 450

*Political Science:* PLSC 358, 359, 361

**Free Electives:** 10-25

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) No more than 12cr in foundation courses may be counted towards the major.
- (3) This requirement may also be fulfilled by completing one Topics course and either the departmental honors program or a graduate seminar with a concluding paper. Students taking two Topics courses must take two with different numbers.
- (4) Courses selected from 300- and 400-level offerings; no more than 6cr from HIST 493 as major elective. Students who have taken three foundation courses must take at least seven 300- and 400- level HIST courses in addition to Topics courses. Those with four foundation courses need take only five 300-400-level HIST courses in addition to Topics courses.

### Bachelor of Science in Education–Social Studies Education/History Track (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Humanities–History:** fulfilled by required courses in major

**Mathematics:** 3cr

**Social Science:** ANTH 110, ECON 121, and PSYC 101

**Liberal Studies Electives:** 6cr, ECON 122, GEOG 230,

no courses with HIST prefix

**College:** 35

3 additional credits of MATH 100 level or above 3cr  
(in addition to Liberal Studies MATH) (1)

**Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology 3cr

EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

CHSS 342 Social Studies Teaching Lab 1cr

EDEX 301 Education of Students with Disabilities in 2cr

Inclusive Secondary Settings

EDEX 323 Instruction of English Language Learners 2cr

with Special Needs

EDSP 477 Assessment of Student Learning: Design and 3cr

Interpretation of Educational Measures

EDUC 242 Pre-Student Teaching Clinical Experience I 1cr

EDUC 342 Pre-Student Teaching Clinical Experience II 1cr

EDUC 441 Student Teaching 12cr

EDUC 442 School Law 1cr

EDUC 455 Teaching of Social Studies in Secondary Schools 3cr

**Major:****Foundation Courses: (2)**

HIST 201	Western Civilization Before 1600	3cr	27
HIST 202	Western Civilization Since 1600	3cr	
HIST 204	United States History to 1877	3cr	
HIST 205	United States History Since 1877	3cr	

**Research Courses:**

HIST 200	Introduction to History	3cr
HIST 401-404	Topics (3)	3cr
		9cr

**Controlled Electives:**

One Non-Western History course: Latin America, Africa, Asia, Middle East, or Russia, 300 or 400 level  
 One United States History course at the 300 or 400 level  
 One History course at the 300 or 400 level

**Social Science Distribution:**

GEOG XXX	200-level or higher Geography course	3cr	12
PLSC 111	American Politics	3cr	
PLSC 280	Comparative Government I: Western Political Systems <i>or</i>		
PLSC 285	Comparative Government II: Non-Western Political Systems	3cr	
SOC 337	World Societies and World Systems <i>or</i>	3cr	
SOC 362	Racial and Ethnic Minorities <i>or</i>		
SOC 231	Contemporary Social Problems		

**Free Electives:**

1

**Total Degree Requirements:**

123

- (\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog. In order to student teach, students must have a 3.0 cumulative GPA in their major (social science and history courses). To be licensed to teach Education/History majors must apply for Social Studies Education certification.
- (1) Students are required to take an additional 3cr of MATH beyond the Liberal Studies requirement for a total of 6cr, all of which must be 100 level or above.
  - (2) In exceptional cases, the student's advisor may give special permission to substitute two upper-level courses for one of the foundation courses.
  - (3) This requirement may be fulfilled by completing either the departmental honors program or graduate seminar with a concluding paper.

**History Honors Program**

The honors program is open by departmental permission to History, History Pre-Law, and Social Studies Education/History majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in History courses. Students complete at least one semester of HIST 487 (a variable-topic course open also to students in the Robert E. Cook Honors College) and two semesters of honors thesis research and writing. Honors theses are completed individually under the direction of a department professor who specializes in the student's area of interest and are approved by a thesis committee comprising the director and two other readers, one of whom may come from outside the History Department. Honors History courses count toward the major; completion of an honors thesis substitutes for HIST 480.

Students interested in the History Honors program should discuss this opportunity as early as possible with their advisors. Students may file a declaration of intent during the sophomore year; a formal application for admission must be made, normally early in the junior year. The program is particularly encouraged for students intending to seek admission to graduate or professional schools. Honors coursework is designated on university transcripts; students completing the departmental honors program are recognized at departmental commencement ceremonies.

**History Honors Track**

9

HIST 483	Honors Thesis	6cr (1)
HIST 487	Honors Colloquium in History	3cr

(1) Two semesters, 3cr each

**Department of Journalism****Website:** [www.iup.edu/journalism](http://www.iup.edu/journalism)**Randy L. Jesick, Chairperson;** Heilman, Loomis, Mukasa, Papakie; and professors emeriti DeGeorge, Furgiuele, Truby

Students interested in a career in news-editorial or public relations fields, with opportunities in such related areas as magazines, advertising, visual journalism, online journalism, and marketing should enjoy this innovative, flexible program. The journalism major combines journalism elective courses, the student's choice of a variety of courses from other university departments, plus internships which provide on-the-job experience.

The IUP journalism major is flexible for the individual student, who decides, with an advisor, what directions his or her education will take for a mass communications career.

A student wishing to enter the program becomes a journalism major in the College of Humanities and Social Sciences. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the university. A student who completes the major graduates with a B.A. degree with a major in Journalism. Because journalism itself covers all areas of life, the journalism major covers many areas of study preparation. There are only four required courses, so the student is free to mold the program to his/her own special interests through both major and free electives.

The journalism major will use journalism courses to fulfill the minimum of 30 credits required for the major. All journalism majors must complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in third and fourth levels of a foreign language, or by completing all levels of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

The department offers an 18-credit minor designed to complement any major. Three 3-credit courses are required: JRNL 105, 102, and 120. The remaining 9 credits may be taken from the following list of journalism major courses: JRNL 326, 338, 344, 347, 375, and designated Special Topics courses. Internship credits do not apply toward the 18-credit minor; however, a student in the minor program may take an internship and apply the credits as free electives.

**Course Sequence**

The journalism faculty offers the following operational policy for its course sequence and prerequisites. The basic idea is for students to take Level I courses prior to Level II courses, etc. Special attention should be given to course prerequisites to avoid scheduling students without proper experience into courses. The faculty retains flexibility of waiving sequence and prerequisites in individual cases.

**Level I**

JRNL 102	Basic Journalistic Skills
JRNL 105	Journalism and the Mass Media
JRNL 120	Journalistic Writing
JRNL 220	Writing for the Print Media

**Level II**

JRNL 223	Photojournalism
JRNL 243	History of the American Press
JRNL 250	Women and the Press
JRNL 261	Introduction to the Magazine Industry
JRNL 321	Feature Writing
JRNL 326	Public Relations I
JRNL 327	Layout, Design, and Production

JRNL 328	News Reporting
JRNL 337	Editing
JRNL 344	Issues and Problems
JRNL 345	Sports Journalism
JRNL 375	World News Coverage
JRNL 393	Document Design I (inactive course)

### Level III

JRNL 347	Journalism Law
JRNL 348	Opinion Writing
JRNL 400	Professional Preparation
JRNL 423	Management in Mass Communications
JRNL 427	Publications
JRNL 430	Public Opinion and the News Media
JRNL 446	Research Methods in Journalism
JRNL 450	Advertising Writing
JRNL 482	Independent Study
JRNL 490	Public Relations II
JRNL 491	Presentation Making
JRNL 492	Problem Solving in Public Relations
JRNL 493	Internship
JRNL 494	Document Design II (inactive course)

## Bachelor of Arts—Journalism

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53-55

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with JRNL prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 30  
**Required Courses:**

JRNL 102	Basic Journalistic Skills (2)	3cr
JRNL 105	Journalism and the Mass Media (2)	3cr
JRNL 220	Writing for the Print Media (2)	3cr
JRNL 328	News Reporting (2)	3cr

**Controlled Electives:**  
Other JRNL courses (as listed in this catalog) (3) 18cr

**Other Requirements:** 0  
Department recommends a planned program of dual major, minor(s), or electives (4, 5)

**Free Electives:** 29-37

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) A grade of C or better required for graduation with a degree in journalism.
- (3) A maximum of 6cr of internship can be applied to major.
- (4) Students may take no more than 15cr outside the College of Humanities and Social Sciences without prior approval of advisor.
- (5) Majors in the public relations sequence should make every effort to schedule BTST 321, MKTG 320, and MKTG 433.

## Minor—Journalism 18 (1)

### Required Courses:

JRNL 102	Basic Journalistic Skills	3cr (2)
JRNL 105	Journalism and the Mass Media	3cr (2)
JRNL 120	Journalistic Writing	3cr (2)
<b>Controlled Electives:</b> Three courses from the following:		9cr
JRNL 243, 326, 338, 344, 347, 375, 481	(3)	

- (1) Internship credits do not apply toward the 18cr minor; however, a student in the minor program may take an internship and apply the credits as free electives.

- (2) The above three courses are to be taken in sequence.
- (3) Minors may substitute only with departmental permission.

## Department of Philosophy

**Website:** [www.iup.edu/philosophy](http://www.iup.edu/philosophy)

**Mary MacLeod, Chairperson;** Caraway, Pedersen, Rives, Rubenstein; and professors emeriti Boone, Bouffard

The program in philosophy is designed to provide the student with a capacity for thinking clearly, with a critical attitude, and with the ability to reason theoretically.

### Major

The major offers the background required for graduate work in philosophy. Those whose primary interests are in other disciplines will find philosophy courses that relate directly to their fields on a theoretical level. Both the minor and double major are especially desirable for their reflective benefits and because of the essentially interdisciplinary nature of philosophy.

### Individually Designed Philosophy Minor

As a minor, philosophy has much to offer in helping individuals of various backgrounds better understand the fundamental assumptions of their disciplines. For that reason, the minor in philosophy will be individually designed to meet special career needs and personal interests. Selection of courses will be accomplished through discussions with and approval of the department advisor. Students must expect careful planning in any program approved. For further explanation and suggestions, see explanation under Philosophy Minor program requirements and consult department advisor.

### Liberal Studies Offerings

The Philosophy program's Liberal Studies courses are all introductory in nature; none of them presupposes any philosophical background. The student may choose from PHIL 101, 110, 120, 221, 222, and 223.

### Pre-Law Track

The Department of Philosophy participates in the University Pre-Law Track program whereby a student majors in one of several academic disciplines including philosophy and also meets the pre-law track requirements. Students interested in the philosophy major/pre-law track should consult the departmental pre-law advisor. Philosophy courses included in the pre-law track program are PHIL 101 or 110, 222, and 450. Philosophy/Pre-Law Track majors are required to take PHIL 101 or 110 and 222.

### Philosophy Honors Program

The honors program is open by departmental invitation to Philosophy and Philosophy/Pre-Law majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in Philosophy courses. Students complete PHIL 480/H/, 483/H/, and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. To determine how honors track courses will be integrated into existing requirements for the Philosophy or Philosophy Pre-Law major, students should consult their advisors.

Any student satisfying the GPA requirement at the end of his or her third semester at IUP will be automatically advised of the requirements of the honors track and invited to participate.

## Bachelor of Arts—Philosophy

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** 3cr

**Philosophy:** included in major

**Liberal Studies Electives:** 9cr, no courses with PHIL prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

<b>Major:</b>	30	<b>Free Electives:</b>	10-22
<b>Required Courses:</b>		<b>Total Degree Requirements:</b>	120
PHIL 221 Symbolic Logic I	3cr	(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.	
PHIL 222 Ethics	3cr	(2) No more than four 100-200 level courses may be counted toward the major. Only PHIL courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.	
<b>Controlled Electives:</b> Eight PHIL courses:	24cr	(3) No more than 9 nonclasswork credits may be counted toward the major. Nonclasswork credits include independent study, independent honors project, and internship in philosophy.	
PHIL 324 or 325 and one other from the following: (6cr)			
PHIL 324 Ancient Philosophy			
PHIL 325 Modern Philosophy			
PHIL 326 Phenomenology and Existentialism			
PHIL 410 Contemporary Analytic Philosophy			
PHIL 420 or 421 and one other from the following: (6cr)			
PHIL 330 Philosophy of Science			
PHIL 420 Metaphysics			
PHIL 421 Theory of Knowledge			
PHIL 460 Philosophy of Language			
Four other PHIL courses (12cr) (may be from the above lists) (with restrictions) (2, 3)			

<b>Free Electives:</b>	31-37
<b>Total Degree Requirements:</b>	120
(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.	
(2) No more than four 100-200 level courses may be counted toward the major. Only PHIL courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.	
(3) No more than 9 nonclasswork credits may be counted toward the major. Nonclasswork credits include independent study, independent honors project, and internship in philosophy.	

### Bachelor of Arts–Philosophy/Pre-Law Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** 3cr

**Philosophy:** included in major

**Liberal Studies Electives:** 9cr, no courses with PHIL prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 30

**Required Courses:**

PHIL 101 Informal Logic: Methods of Critical Thinking <i>or</i>	
PHIL 110 Reasoning and the Law	3cr
PHIL 222 Ethics	3cr
<b>Controlled Electives:</b>	24cr

PHIL 324 or 325, and one other from the following: (6cr)

PHIL 324 Ancient Philosophy	
PHIL 325 Modern Philosophy	
PHIL 326 Phenomenology and Existentialism	
PHIL 410 Contemporary Analytic Philosophy	
PHIL 420 or 421, and one other from the following: (6cr)	
PHIL 330 Philosophy of Science	
PHIL 420 Metaphysics	
PHIL 421 Theory of Knowledge	
PHIL 460 Philosophy of Language	

Four other PHIL courses (12cr) (may be from the above lists) (with restrictions) (2, 3)

**Other Requirements: Pre-Law Interdisciplinary Track** 15-21

Seven courses, including at least one from each of six areas:

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 255

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Political Science:* PLSC 358, 359, 361

### Minor–Philosophy 15

**Controlled Electives:**

Five PHIL courses (with restrictions) (1, 2) 15cr

- (1) No more than three 100-200 level courses may be counted toward the minor. Only PHIL courses may be counted toward the minor. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.
- (2) No more than 3 nonclasswork credits may be counted toward the minor. Nonclasswork credits include independent study, independent honors project, and internship in philosophy.

### Philosophy Honors Track 12cr

**Required Courses:**

HNRC 499 Honors Senior Synthesis	*cr (1)
PHIL 480/H/ Honors Seminar in Philosophy	3cr
PHIL 483/H/ Honors Thesis in Philosophy	6cr

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.

## Department of Political Science

**Website:** [www.iup.edu/politicalscience](http://www.iup.edu/politicalscience)

**John F. Sitton, Chairperson;** Bahgat, Chambers, Fiddner, Jackson, Kuffner-Hirt, Martin, Torges, Wheeler; and professors emeriti Chaszar, Morris, Palmer, Platt

Political scientists focus upon political systems, including the effect of environment on the system, inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include the normative approach, in which philosophical attention centers on values by asking the question “What ought to be?” and the behavioral approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions “How?” and “Why?”

Students majoring in political science have employment opportunities in federal, state, and local governments and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students graduating in political science, as in any of the social sciences, are in demand by employers in business and industry. Students completing the Political Science Internship Program have experienced considerable success in finding employment upon graduation. The political science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts degree with majors in Political Science, in Government and Public Service,\* and in Political Science Pre-Law track. An interdisciplinary major and a minor in International Studies are sponsored by the Political Science Department. The department also offers a minor in political science.

*\*In July 2010, the B.A. degree with a major in Government and Public Service was placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

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### Bachelor of Arts–Political Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** 3cr

**Social Science:** PLSC 111

**Liberal Studies Electives:** 6cr, no courses with PLSC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 33

**Required Courses:**

PLSC 101 World Politics 3cr (2)

PLSC 111 American Politics \*cr (3)

**Controlled Electives:** 30cr

At least one course in three of the first four areas:

*American Studies:* PLSC 251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359

*Political Theory:* PLSC 360, 361, 362

*Public Policy and Administration:* PLSC 250, 370, 371, 444

*International Studies:* PLSC 280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)

*General Political Science:* PLSC 300 (strongly recommended), PLSC 377, 480, 481, 482, 485, 493

**Other Requirements:** 18-27

Second major, minor, or concentration as approved by advisor with maximum of 15cr outside College of Humanities and Social Sciences unless specifically approved

**Free Electives:** 4-19

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
  - (2) PLSC 101 satisfies non-Western requirement.
  - (3) Credits for PLSC 111 are counted in the Liberal Studies Social Science requirements.
  - (4) PLSC 280 and/or 285 recommended as prerequisite to PLSC 380 through 389.
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### Bachelor of Arts–Political Science/Pre-Law Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** 3cr

**Social Science:** PLSC 111

**Liberal Studies Electives:** 6cr, no courses with PLSC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 33

**Required Courses:**

PLSC 101 World Politics 3cr (2)

PLSC 111 American Politics \*cr (3)

**Controlled Electives:** 30cr

At least one course in three of the first four areas:

*American Studies:* PLSC 251, 300, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359

*Political Theory:* PLSC 360, 361, 362

*Public Policy and Administration:* PLSC 250, 370, 371, 444

*International Studies:* PLSC 280, 282, 283, 285, 320, 321, 380, 382, 383, 384, 385, 386, 387, 388, 389 (4)

*General Political Science:* PLSC 300 (strongly recommended), PLSC 377, 480, 481, 482, 485, 493

**Other Requirements: Pre-Law Interdisciplinary Track** 15-21

Seven courses, including at least one from each of six areas:

*Business:* ACCT 201, ACCT 202, BLAW 235

*Criminology:* CRIM 210, 215, 255

*Economics:* ECON 121, 122, 332

*English:* ENGL 212, 265, 310, 321

*History:* HIST 320, 321, 346

*Philosophy:* PHIL 101, 110, 222, 450

**Free Electives:** 9-21

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
  - (2) PLSC 101 satisfies non-Western requirement.
  - (3) Credits for PLSC 111 are counted in the Liberal Studies Social Science requirements.
  - (4) PLSC 280 and/or 285 recommended as prerequisite to PLSC 380 through 389.
- 

### Bachelor of Arts–International Studies/Political Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** 3cr

**Social Science:** PLSC 111

**Liberal Studies Electives:** 6cr, no courses with PLSC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 33

**Required Courses:**

PLSC 101 World Politics 3cr

PLSC 111 American Politics \*cr (2)

Interdisciplinary sequence 15cr (3)

Cultural specialization sequence 15cr (4)

**Other Requirements:** 0 (5)

**Free Electives:** 31-37

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives. Only courses 300 level and beyond may count in the cultural specialization sequence.
  - (2) Credits for PLSC 111 are counted in the Liberal Studies Social Science requirements.
  - (3) The interdisciplinary sequence includes an introductory or comparative international course from each of five social science disciplines: anthropology, economics, geography, history, political science, and sociology. Selection depends on goal(s) of major and should be planned in consultation with the International Studies advisor.
  - (4) The specialization sequence focuses on one area or culture and three disciplines: economic systems, political systems, language, literature, history, geography. Currently, three specializations are offered: Latin America, the Far East, and Soviet Studies. Consult with advisor for planning course selection.
  - (5) Majors are strongly encouraged to take advantage of the study abroad opportunities available through IUP departmental programs and of exchange opportunities available through the International Education Office.
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**Minor–Political Science** **15****Required Courses:**

PLSC 101	World Politics	3cr
PLSC 111	American Politics	3cr

**Controlled Electives:**

Three additional PLSC courses	9cr
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**Minor–International Studies** **18****Required Courses:**

PLSC 101	World Politics	3cr
PLSC 111	American Politics	*cr (1)

**Controlled Electives:**

Interdisciplinary sequence (see major)	15cr
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(1) Credits counted with Liberal Studies Social Sciences.

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**Department of Religious Studies**

**Website:** [www.iup.edu/religiousstudies](http://www.iup.edu/religiousstudies)

**C. Stuart Chandler, Chairperson;** Gibson, Holm, Smith, Yirenkyi; and professors emeriti Chan, Ferrara, Lin, Mlecko, Montgomery, Schaub

The program in Religious Studies is designed to provide a balanced, nonsectarian, cross-cultural approach leading to a better understanding of the phenomenon of religion in human experience. It emphasizes an interdisciplinary approach and encourages the minor or a double major, as well as a single major in Religious Studies.

The program is valuable for those planning to teach about religions or religious studies in schools at the primary, secondary, or college level. The program also provides an excellent background for graduates planning to enter Catholic, Jewish, or Protestant seminaries. Additionally, Religious Studies is a good complement to majors in such fields as Anthropology, English, Fine Arts, History, International Studies, Music, Philosophy, Political Science, Psychology, and Sociology. Religious Studies is one significant way to integrate course studies within the university curriculum.

In addition to the 27 credits of Religious Studies courses in the major, 3 credits must be taken from a number of courses offered by other departments which complement those offered in Religious Studies. Opportunity for interdisciplinary and cross-cultural study is implicit in the study of religious themes and is required in the Religious Studies program at IUP.

**Religious Studies Minor**

The requirements for a minor are 15 credits that must be taken from the Religious Studies offerings, which include certain required courses.

**Religious Studies Honors Program**

The honors program is open by departmental invitation to Religious Studies majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in Religious Studies courses. Students complete RLST 480/H/, 483/H/, 493/H/, and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. To determine how honors track courses will be integrated into existing requirements for the Religious Studies major, students should consult their advisors.

**Liberal Studies Offerings**

The Religious Studies program's Liberal Studies courses are all introductory in nature; none presupposes any Religious Studies background. The student may choose from RLST 100, 110, 250, and 290.

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**Bachelor of Arts–Religious Studies**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: **53**

**Mathematics:** 3cr

**Liberal Studies Electives:** 9cr, no courses with RLST prefix

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**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 30

**Controlled Electives:** (2)

One Core: RLST 100 or 110	3cr
Western: RLST 260, 290, 380, 410, or 440	3cr
Eastern: RLST 311, 370, or 375	3cr
Indigenous: RLST 360 or 365	3cr
Five additional RLST courses (3)	15cr
One religion-related course (3)	3cr

**Free Electives:** 31-37

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in the Liberal Studies electives.
  - (2) Other courses may be approved in consultation with advisor.
  - (3) Consult Religious Studies advisor.
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**Minor–Religious Studies** **15**

Core: RLST 100 or 110	3cr
Western: RLST 260, 290, 380, 410, or 440	3cr
Eastern: RLST 311, 370, or 375	3cr
Indigenous: RLST 360 or 365	3cr
Elective: one RLST course (1)	3cr

- (1) Consult Religious Studies advisor.
- 

**Religious Studies Honors Track** **12****Required Courses:**

HNRC 499	Honors Senior Synthesis (1)	
RLST 480/H/	Seminar in Religious Studies	3cr
RLST 483/H/	Honors Thesis in Religious Studies	3cr
RLST 493/H/	Internship in Religious Studies	3cr

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.
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**Department of Sociology**

**Website:** [www.iup.edu/sociology](http://www.iup.edu/sociology)

**D. Alex Heckert, Chairperson;** Anderson, Bonach, Boser, Donner, Gunter, Heasley, Hildebrandt, Mabry, Shinberg, Swauger, Witham; and professors emeriti Darling, Holtz, Hunter

The Department of Sociology seeks to develop both the scientific and humanistic foundations of sociology, to educate the wider community as to the significance of sociological knowledge, to apply sociological knowledge to current social problems, and to advance the profession by promoting the welfare of individuals and society. The discipline of sociology focuses primarily on the analysis of modern industrial societies by examining their basic patterns of social organization, the various changes that occur within these patterns, and the impact of the patterns on individual thought and action. Students are prepared for employment in human service fields or for graduate study in sociology or related fields.

Students majoring in Sociology may select one of four tracks: General Sociology, Human Services, Sociology of Disability Services, and Applied Social Research. The general track attempts to broadly educate those students who may wish to pursue graduate training in sociology and make sociology a career and profession. Because of its flexibility, it is also appropriate for students who want to pursue double majors that would include such fields as psychology or criminology. The general track gives students the broadest possible training in sociology. Students graduating with majors in general sociology often find employment in business, industry, and government.

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The Human Services track in sociology seeks to help students understand the causes of many of the problems that plague modern societies, such as poverty, racial discrimination, substance abuse, and domestic violence. It is designed to provide students with the knowledge and skills necessary to become practitioners in various human services areas (e.g., juvenile delinquency, medical sociology, gerontology, and interpersonal dynamics and family sociology).

Students who complete the specialized major track for Sociology of Disability Services will be prepared for employment in the human services/social services as therapeutic staff support personnel or in a wide variety of career services such as mental health/mental retardation programs, community-based residential/employment/training programs, early intervention programs, residential treatment programs, aging programs, and other agency service providers for individuals with disabilities. Additionally, students in this track are encouraged to complement their studies by adding a second major in Disability Services Program or a minor in Special Education offered by the Department of Special Education and Clinical Services to better prepare them in a multidisciplinary curriculum. Minors are also recommended in Psychology or Child Development and Family Relations.

The Applied Social Research track emphasizes the development of research and assessment skills in students. Such skills are important in carrying out program assessments, needs assessments, program development, and other activities that focus on gathering, analyzing, and interpreting data important for policymakers.

The department also prepares teachers for secondary school social studies with a concentration in sociology. The program leads to the degree Bachelor of Science in Education. With its emphasis on patterns of social organization in modern industrialized societies, sociology provides a solid foundation for teaching social science at the secondary level. Minors in sociology are available in the following tracks: general sociology, human services, sociology of disability services, and applied social research.

### Sociology Honors Program

The honors program is open by departmental permission to declared Sociology majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in Sociology courses.

Students complete CHSS 489 (a multidisciplinary colloquium emphasizing problem-solving, discussion, reading, and writing on a topic or theme); SOC 483; and HNRC 499, which fulfills the Liberal Studies Synthesis requirement. Students must earn at least a grade of C in each course completed for the track. To determine how honors track courses will be integrated into existing requirements for the Sociology major, students should consult their advisors.

Students may be invited to apply or may nominate themselves. In either case, to be considered for the Sociology honors track, students must have earned 15 credits in Sociology, including SOC 320. Sociology majors who have met the eligibility criteria must submit an application to the chairperson of the Department of Sociology after they have earned at least 60 credits.

### Bachelor of Arts–Sociology/General Sociology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217 recommended

**Social Science:** SOC 151

**Liberal Studies Electives:** 9cr, no courses with SOC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 33

**Required Courses:**

SOC 151	Principles of Sociology	*cr (2)
SOC 320	Sociological Theory	3cr
SOC 460	Social Research Methods I	3cr
SOC 461	Social Research Methods II	3cr

One course from the following: 3cr

SOC 361 Social Stratification

SOC 362 Racial and Ethnic Minorities

SOC 363 Sociology of Gender

At least one different course from four of the following substantive areas: 12cr

*Social Inequality and Social Change:*

SOC 269, 337, 361, 362, 363, 387, 448, 452, 458

*Deviance and Social Problems:*

SOC 231, 269, 333, 335, 427, 428, 452

*Individual in Society:* SOC 251, 269, 345, 357, 452

*Social Organization and Institutions:* SOC 286, 336, 340, 341, 342, 348, 352, 421, 458

*Comparative Sociology:* SOC 233, 271, 272, 273, 286, 314, 337, 342, 387

Free Sociology Electives (3) 9cr

**Free Electives:** 28-34

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) Credits counted in Liberal Studies, not in the major.
- (3) Internship in Sociology (SOC 493) will not count as part of the required Free Sociology electives and must count as credits beyond the 33cr required for the major (out of Free Electives). The student must write a one-page justification explaining the selection of his/her 9cr of Free Sociology electives as it relates to the internship experience.

### Bachelor of Arts–Sociology/Human Services Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217 recommended

**Social Science:** SOC 151 required, ANTH 110 and PSYC 101 recommended

**Liberal Studies Electives:** 9cr, no courses with SOC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 45

**Required Courses:**

SOC 151	Principles of Sociology	*cr (2)
SOC 320	Sociological Theory	3cr
SOC 387	Social and Cultural Change	3cr
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr
SOC 460	Social Research Methods I	3cr
SOC 461	Social Research Methods II	3cr
SOC 493	Internship in Sociology (3)	12cr

**Controlled Electives:** One substantive area (4) 15cr (5)

*Medical Sociology:* ANTH 444 or SOC 342, and four courses from the following: ANTH 222, 444, BIOL 151 or 155, ECON 335, FDNT 212, PSYC 321, 378, RGPL 350, SOC 231, 336, 342, 357, 448, 452, 457

*Gerontology:* PSYC 378 or SOC 357, and four courses from the following: ANTH 444, ECON 335, PSYC 312, 378, RGPL 350, SOC 231, 251, 336, 342, 352, 357, 448, 457

*Juvenile Delinquency:* SOC 333, and four courses from the following: CRIM 102, 225, 235, 394, GEOG 432, HIST 374, SOC 231, 269, 335, 336, 345, 361, 362, SOC 428, 448, 457

*Interpersonal and Family Sociology:* SOC 336 or 345, and four courses from the following: CDFR 218, 224, PSYC 311, 321, 330, SOC 251, 269, 335, 336, 345, SOC 361, 363, 427, 428, 448, 452, 457

*Labor and Industry:* SOC 340 or 348, and four courses from the following: ECON 330, 350, 371, 372, 373, ELR 426, 480, HIST 373, PSYC 390, SOC 231, 340, 348, 361, 448, SOC 457, 458

*Community Development:* SOC 231 or 448, and four courses from the following: ANTH/SOC 271, 272, 314, ECON 336, 383, FDNT 402, GEOG 331, 332, PLSC 251, RGPL 350, SOC 269, 333, 336, 341, 363, 448, 457

**Free Electives:** 16-22

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) Credits counted in Liberal Studies, not in the major.
- (3) SOC 391 and 392 must be taken before SOC 493. Generally, SOC 493 is taken in the summer before the senior year.
- (4) Students may create their own substantive area with the approval of the department chairperson.
- (5) At least three courses in any substantive area must be SOC courses.

### Bachelor of Arts–Sociology/Applied Social Research Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217

**Social Science:** SOC 151 required, ANTH 110 recommended

**Liberal Studies Electives:** 9cr, COSC 101, no courses with SOC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 45

**Required Courses:**

SOC 151	Principles of Sociology	*cr (2)
SOC 320	Sociological Theory	3cr
SOC 456	Field Research Methods	3cr
SOC 457	Computer Use in Sociology	3cr
SOC 458	Political Sociology	3cr
SOC 460	Social Research Methods I	3cr
SOC 461	Social Research Methods II	3cr
SOC 493	Internship in Sociology (3)	12cr

**Controlled Electives:** One substantive area (4) 15cr (5)

*Medical Sociology:* ANTH 444 or SOC 342, and four courses from the following: ANTH 222, 444, BIOL 151 or 155, ECON 335, FDNT 212, PSYC 321, 378, RGPL 350, SOC 231, 335, 336, 342, 357, 448, 452

*Gerontology:* PSYC 378 or SOC 357, and four courses from the following: ANTH 444, ECON 335, 360, PSYC 312, 378, RGPL 350, SOC 231, 251, 336, 342, 352, 357, 448

*Juvenile Delinquency:* SOC 333 and four courses from the following: CRIM 102, 225, 235, 394, GEOG 432, HIST 374, SOC 231, 269, 335, 336, 345, 361, 362, 428

*Interpersonal and Family Sociology:* SOC 336 or 345, and four courses from the following: CDFR 218, 224, PSYC 311, 321, 330, SOC 251, 269, 335, 336, 345, SOC 361, 363, 427, 428, 448, 452

*Labor and Industry:* SOC 340 or 348, and four courses from the following: ECON 330, 350, 371, 372, 373, ELR 426, 480, HIST 373, PSYC 390, SOC 231, 340, 348, 361, 387, SOC 448, 458

*Community Development:* SOC 231 or 448, and four courses from the following: ANTH/SOC 271, 272, 314, ECON 336, 383, FDNT 402, GEOG 331, 332, PLSC 251, RGPL 350, SOC 269, 333, 336, 341, 363, 448

**Free Electives:** 16-22

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies elective.
- (2) Credits counted in Liberal Studies, not in the major.
- (3) SOC 456, 457, 460, and 461 must be taken before taking SOC 493. Generally, SOC 493 is taken in the summer before the senior year.
- (4) Students may create their own substantive area with the approval of the department chairperson.
- (5) At least three courses in any substantive area must be SOC courses.

### Bachelor of Arts–Sociology/Sociology of Disability Services Track

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: 53

**Mathematics:** MATH 217 recommended

**Social Science:** SOC 151 and PSYC 101 required, ANTH 110 recommended

**Liberal Studies Electives:** 9cr, no courses with SOC prefix

**College:** 0-6  
Foreign Language Intermediate Level (1)

**Major:** 45

**Required Courses:**

EDEX 111	Introduction to Exceptional Persons	3cr
EDEX 460	Family Perspectives on Disability	3cr
SOC 151	Principles of Sociology	*cr (2)
SOC 320	Sociological Theory	3cr
SOC 336	Sociology of the Family	3cr
SOC 342	Social and Cultural Aspects of Health and Medicine	3cr
SOC 357	Sociology of Aging	3cr
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr
SOC 452	Disability and Society	3cr
SOC 460	Social Research Methods I	3cr
SOC 461	Social Research Methods II	3cr

**Internship:**

SOC 493 Internship in Sociology 12cr (3)

**Suggested Minors or Free Electives:** 16-22

Free elective credits may be used toward the study of a minor discipline. A minor in one of the following areas is recommended:

- Child Development and Family Relations 18cr
- Special Education 18cr (4)
- Psychology 18cr

**Total Degree Requirements:** 120

- (1) Intermediate-Foreign Language may be included in Liberal Studies electives.
- (2) Credits counted in Liberal Studies, not in the major.
- (3) SOC 391 and 392 must be taken before SOC 493. Generally, SOC 493 is taken in the summer before the senior year.
- (4) The minor in Special Education is recommended for students wanting a more in-depth study of disability services from an educational perspective.

### Bachelor of Science in Education–Social Science Education/Sociology Track (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Humanities:** History is fulfilled by courses in the major

**Mathematics:** MATH 217 (recommended)

**Natural Science:** BIOL 103-104 (recommended)

**Social Science:** ECON 121, PSYC 101, SOC 151

**Liberal Studies Electives:** 6cr, PSYC 310 or 330, no courses with SOC prefix



<b>College:</b>		35
3 additional credits of MATH 100-level or above (in addition to Liberal Studies Mathematics) (1)	3cr	
<b>Preprofessional Education Sequence:</b>		
COMM 103 Digital Instructional Technology	3cr	
EDSP 102 Educational Psychology	3cr	
<b>Professional Education Sequence:</b>		
CHSS 342 Social Studies Teaching Lab	1cr	
EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings	2cr	
EDEX 323 Instruction of English Language Learners with Special Needs	2cr	
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr	
EDUC 242 Pre-Student Teaching Clinical Experience I	1cr	
EDUC 342 Pre-Student Teaching Clinical Experience II	1cr	
EDUC 441 Student Teaching	12cr	
EDUC 442 School Law	1cr	
EDUC 455 Teaching of Social Studies in Secondary Schools	3cr	
<b>Major: (2)</b>		21
<b>Required Sociology Courses:</b>		
SOC 231 Contemporary Social Problems	3cr	
SOC 320 Sociological Theory	3cr	
SOC 336 Sociology of the Family	3cr	
SOC 460 Social Research Methods I	3cr	
<b>Controlled Electives:</b>		
One course on Social Equity from the following: SOC 361, 362, 363	3cr	
Select two additional courses: one each from any <i>two</i> of the following three categories:	6cr	
<i>Deviance and Social Problems:</i> SOC 269, 333, 335, 357, 427, 428, 452		
<i>Individual in Society:</i> SOC 251, 345		
<i>Social Organizations and Institutions:</i> SOC 286, 337, 340, 341, SOC 342, 348, 352, 361, 362, 363, 387, 421, 448, 458		
<b>History Distribution Requirements:</b>		9
HIST 202 Western Civilization Since 1600	3cr	
HIST 204 United States History to 1877	3cr	
HIST 205 United States History Since 1877	3cr	
<b>Social Science Distribution Requirements:</b>		9
ANTH 211 Cultural Anthropology	3cr	
GEOG 230 Cultural Geography	3cr	
PLSC 280 Comparative Government I: Western Political PLSC 285 Systems <i>or</i> Comparative Government II: Non-Western Political Systems	3cr	
<b>Free Elective:</b>		1
<b>Total Degree Requirements:</b>		123

- (\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.
- (1) Students are required to take an additional 3cr of MATH beyond the Liberal Studies requirements for a total of 6cr, all of which must be 100 level or above.
- (2) Courses counted toward Liberal Studies credits do not receive duplicate credits in the major.

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**Minor–Sociology/General Sociology 18**

<b>Required Course:</b>		
SOC 151 Principles of Sociology	3cr	
SOC 320 Sociological Theory	3cr	
<b>Controlled Electives:</b>		
One course from the following: SOC 361, 362, 363	3cr	
Three additional courses in Sociology	9cr	

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**Minor–Sociology/Applied Social Research 18**

<b>Required Courses:</b>		
SOC 151 Principles of Sociology	3cr	
SOC 320 Sociological Theory	3cr	
SOC 457 Computer Use in Sociology	3cr	
SOC 460 Social Research Methods I	3cr	
SOC 461 Social Research Methods II	3cr	
<b>Controlled Electives:</b>		
Any SOC course approved by department chair	3cr	

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**Minor–Sociology of Disability Services 18**

<b>Required Courses:</b>		
SOC 151 Principles of Sociology	3cr	
SOC 342 Social and Cultural Aspects of Health and Medicine	3cr	
SOC 391 Foundations of Sociological Practice	3cr	
SOC 392 Clinical Sociological Practice	3cr	
SOC 452 Disability and Society	3cr	
<b>Controlled Electives:</b>		
One course from the following: SOC 336, 357	3cr	

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**Minor–Sociology/Human Services 18**

<b>Required Course:</b>		
SOC 151 Principles of Sociology	3cr	
SOC 391 Foundations of Sociological Practice	3cr	
SOC 392 Clinical Sociological Practice	3cr	
<b>Controlled Electives:</b>		
One course from the following: SOC 320, 361	3cr	
Two additional courses in Sociology	6cr	

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**Sociology Honors Track 12**

<b>Prerequisites:</b> Declared major in Sociology and completion of 60cr, SOC 320, and 12 additional credits in Sociology		
<b>Required Courses:</b>		
CHSS 489/H/ Honors Colloquium	3cr	
HNRC 499 Honors Senior Synthesis	*cr (1)	
SOC 483/H/ Honors Thesis in Sociology	6cr	

- (1) Credits for HNRC 499 are counted in the Liberal Studies Synthesis requirement.

# The College of Natural Sciences and Mathematics

Deanne L. Snively, Dean

Aleksandra B. Kaniasty, Assistant Dean

Daniel A. Burkett, Dean's Associate

Website: [www.iup.edu/natsciandmath](http://www.iup.edu/natsciandmath)

One of the characteristics of the twenty-first century is the marked change in the relation of citizens to their environment. Space probes, orbiting satellites, and productive research on the structure and synthesis of living matter have brought to the forefront for reexamination of such time-honored queries as, "What is the nature of the universe?" or "Can people control their natural environment?" or "How did life begin?" Scientifically found answers to these and other questions, coupled with proper application of this knowledge for humankind's betterment, must be a significant part of the goal of educated people everywhere.

The objectives of the college are to acquaint the student with the kinds of problems which lend themselves to possible solutions through the use of science; to introduce different scientific techniques through significant illustrative experiences; to give a sense of perspective in the development of science; and to develop an understanding of the basic community of all scientific disciplines.

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## Degrees Offered

- **Applied Physics** (Tracks available: Electro-Optics, Nanomanufacturing Technology)
- **Biochemistry**
- **Biology** (Tracks available: Cell and Molecular; Ecology, Conservation, and Environmental Biology; Environmental Health; Honors; Pre-Medical; Pre-Veterinary)
- **Biology Education**
- **Chemistry** (Pre-Medical track available)
- **Chemistry Education**
- **Computer Science** (Tracks available: Applied, Information Assurance, Languages and Systems)
- **Earth and Space Science Education**
- **Electro-Optics** (Associate in Science)
- **Geology** (Tracks available: Geology, Environmental)
- **Mathematics**
- **Mathematics Education**
- **Natural Science** (Tracks available: Pre-Chiropractic, Pre-Dentistry, Pre-Engineering, Pre-Optometry, Pre-Pharmacy, Pre-Physical Therapy, Pre-Podiatry, and Science for Disaster Response)
- **Physics**
- **Physics Education**
- **Psychology**

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## Degrees

The departments of Biology, Chemistry, Computer Science, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is awarded for successful work in the departments of Geoscience, Mathematics, and Natural Science. The Bachelor of Arts degree is awarded by the Department of Psychology. An Associate in Science is awarded in Electro-Optics.

Several departments in the college sponsor Master of Arts or Master of Science degrees. The Department of Psychology offers the Doctor of Clinical Psychology degree. Information on these programs can be obtained from the School of Graduate Studies and Research.

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## Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the College of Natural Sciences and Mathematics must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements and those for minoring in a specific field appear in the department sections that follow. A double major or minor may encompass a

discipline outside as well as within the college but should be selected only with advisor approval. As a general principle, there is considerable latitude in course choice for Natural Sciences and Mathematics majors; for specifically required courses, substitution in any program must have the written approval of the student's department chairperson or the college dean.

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## The Foreign Language Requirement

Unless otherwise indicated, each department adheres to the following foreign language requirement:

A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of two years of college instruction in that language. This requirement may be met by one of the following: a) successful completion of the intermediate level in a specific language or b) successful completion of an exemption or credit examination.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Natural Sciences and Mathematics degree if the department he/she is majoring in does not require a specific language not thus covered.

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## Internship Programs

Several departments in the College of Natural Sciences and Mathematics have established extensive internship programs under which students engage in an off-campus supervised work experience for credit. For more information about specific internship programs, students should consult with the chairperson of the department in which the student is majoring. Students eligible for internships may receive federal or state funding.

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## Preprofessional Programs

The college offers programs for the preparation of students for acceptance by a professional school: pre-medical (including osteopathic medicine) and pre-veterinary medicine. In addition, the college offers a major in the Natural Sciences for those students whose goal is dentistry, pharmacy or pharmacology, optometry, podiatry, chiropractic medicine, or physical therapy. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

The preprofessional health programs in the college presuppose that the student has an excellent background in the high school sciences and mathematics and will prove to be an excellent college student. Students should identify their proposed field of study upon admission to IUP.

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## Cooperative Programs

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to our students. These formal agreements provide for accelerated graduate or professional degree programs or carefully planned and coordinated undergraduate programming with the cooperating institution. Programs are intended to assure acceptance of properly qualified students by the cooperating professional schools. Additional information about specific programs can be found under the appropriate academic department in this catalog.

- **Chiropractic** (See Natural Science): The New York Chiropractic College and Logan Chiropractic College programs are designed to accelerate professional training of IUP students in the field of chiropractic medicine.
- **Dentistry** (see Natural Science): The Temple University School of Dentistry program is designed to accelerate the professional training of IUP students in the field of dentistry.
- **Engineering—Drexel University** (See Department of Physics): This program combines the opportunity for two years of study at IUP with the

remaining three years of study as part of the Drexel plan of cooperative education. Students completing this program will receive a bachelor's degree in engineering from Drexel University.

- **Engineering—University of Pittsburgh** (See Natural Science)
- **Forestry and Environmental Studies** (See Department of Biology): This program with Duke University coordinates the education of students from IUP with the graduate programs in forestry and environmental management offered at Duke University in Durham, North Carolina.
- **Jefferson Medical College, Physician Shortage Area Program** (See Department of Biology): The program with increases the opportunities for IUP students to be admitted to Jefferson Medical College.\*
- **Lake Erie College of Osteopathic Medicine (LECOM)** (See Department of Biology): LECOM and IUP have a cooperative “3+4” program. Students will be awarded a B.S. degree with a major in Biology from IUP upon successful completion of the first-year curriculum at LECOM and of the undergraduate requirements at IUP.\*
- **Optometry** (See Natural Science): The Pennsylvania College of Optometry program accelerates the professional training of IUP students in the field of optometry.
- **Pharmacy** (see Natural Science): The Shenandoah University School of Pharmacy or LECOM School of Pharmacy programs are designed to accelerate the professional training of IUP students in the field of pharmacy.
- **Physical Therapy** (see Natural Science): The Gannon University School of Physical Therapy program is designed to enhance the professional training of IUP students in the field of physical therapy.
- **Podiatry** (See Natural Science): The Temple University School of Podiatric Medicine program accelerates the professional training of IUP students in the field of podiatry.
- **Primary Care Partnership:** This program enables the college to identify students with primary care potential and provide these students with the opportunity to interact with primary care faculty at the Pennsylvania State University College of Medicine.\*
- **Primary Care Scholars Program:** The Philadelphia College of Osteopathic Medicine (PCOM) has established this program with six State System of Higher Education universities. The program will enable students who have demonstrated both academic excellence and a commitment to the practice of primary care in Pennsylvania to gain early admission to PCOM.\*

\*Contact Ms. Martha Jack for specific information.

## Department of Biology

**Website:** [www.iup.edu/biology](http://www.iup.edu/biology)

**Carl S. Luciano, Chairperson;** Ayebo, N. Bharathan, S. Bharathan, Bi, Brennehan, Diep, Duchamp, Gendron, Hinrichsen, Irani, Jack, Knoch, Larkin, Lord, Major, Nealen, Newell, Nuttle, Pistole, Simmons, Travis, Winstead; and professors emeriti Andrew, Butler, Gallati, Hulse, Humphreys, Kesner, Linzey, Moore, Schrock

Degrees offered by the Department of Biology are the Bachelor of Science degree with a major in Biology, the Bachelor of Arts degree with a major in Biology, and the Bachelor of Science in Education with a Biology certification. The first two degree programs are under the College of Natural Sciences and Mathematics, and the third is under the College of Education and Educational Technology. The department also offers a Biology minor.

### B.S.—Biology

In addition to the Bachelor of Science degree with no specialization, the department also offers specialized Bachelor of Science tracks in Cell and Molecular Biology; Ecology, Conservation, and Environmental Biology; Environmental Health; Honors Biology; Pre-Medical Biology; and Pre-Veterinary Biology. Students who pursue the Pre-Medical or Pre-Veterinary track must maintain a minimum cumulative GPA of 3.0 after their third semester in the program, in order to continue in that track. All students, including transfer students, must have a cumulative GPA of 3.0 or higher to transfer into the Pre-Medical or Pre-Veterinary track after their third semester.

The Bachelor of Science degree with a major in Biology with no specialization is designed to provide maximum depth in the sciences and mathemat-

ics, combined with flexibility in the choice of ancillary science courses. This program allows the student (in consultation with the advisor) to select a suite of ancillary science and mathematics courses that is most appropriate to the student's specific interests within the field of biology. With proper selections from among ancillary science courses, a student could minor in any of the following: Biochemistry, Chemistry, Geoscience, or Applied Statistics. Furthermore, with proper selection of free electives, a student could minor in either Mathematics or Physics.

### B.A.—Biology

The Bachelor of Arts degree with a major in Biology is designed for students who wish to combine a primary academic interest in Biology with a secondary interest in a complementary field. Through the choice of complementary field and free electives, this curriculum allows the greatest overall flexibility in a student's program of study. The complementary field also allows pursuit of a minor or a double major in the secondary area of interest. The primary Biology major combined with a double major or a minor in the complementary field can make an attractive educational package for the student and for potential employers. Examples of complementary fields that might enhance a student's competitiveness in the job market include Anthropology, Business Administration, Computer Science, Criminology (for forensic science), English (for technical writing), Foreign Language, Geoscience, Marketing, or Psychology.

### B.S.—Biology/Cell and Molecular Biology Track

Students electing the Bachelor of Science degree with an emphasis in Cell and Molecular Biology will take the core Biology courses and, in addition, a collection of upper-division courses that focus collectively on important aspects of modern cell and molecular biology. This track will prepare students for employment in technical positions or for graduate studies in cell biology, molecular biology, biotechnology, or related biomedical disciplines.

### B.S.—Biology/Ecology, Conservation, and Environmental Biology Track

The Ecology, Conservation, and Environmental Biology (ECEB) Track includes all core Biology courses and a selection of related courses that focus on ecological and environmental sciences. In order to achieve an environmental focus, the student must complete broad training in the sciences and mathematics. The track is designed to provide flexibility to allow pursuit of specialized interests within ECEB, including minors in other environmental disciplines (e.g., environmental geology, geography, regional planning, law, etc.). Course requirements for professional certification by the Ecological Society of America (Certified Associate Ecologist) and/or the Wildlife Society (Certified Wildlife Biologist) can be met within this track. This track prepares students for pursuing advanced degrees or employment in areas related to ecology and environmental sciences at universities, government, and private companies.

### Bachelor of Science—Biology/Environmental Health Track

Students electing the Bachelor of Science degree with an emphasis in Environmental Health will take the core Biology courses and a collection of upper-division courses that focus on environmental factors impacting human health. In addition, students will elect technical courses offered by other departments that provide analytical and problem-solving skills to identify, evaluate, and manage these factors. This track will prepare students for employment as environmental health specialists and practitioners in industry, government, and academia and for entry into graduate school programs in environmental and public health.

### B.S. in Education—Secondary Biology

The Department of Biology, in conjunction with the College of Education and Educational Technology, provides a program leading to the Bachelor of Science in Education with certification to teach biology. The program is committed to preparing teachers who possess a strong foundation in biology, a broad background in associated sciences, and an extensive preparation in pedagogy.

### Biology Honors Program

The honors program is open by departmental permission to all majors in the Department of Biology. Students who, by the end of the first semester

of their sophomore year, have a minimum 3.25 cumulative GPA will be invited to apply for the program. The application will include a transcript and a personal statement outlining the student's academic plan, career goals, and why she or he wants to be considered for the honors program. A department honors committee (makeup to be determined by the department) will select a maximum of twelve students per year for the program.

Students accepted into the program will take BIOL 484 during the first semester of their junior year, two semesters of BIOL 483, and one 500/600-level biology course. The honors thesis will be based on research performed under the supervision of a department professor who specializes in the student's area of interest and must be approved by a thesis committee made up of the faculty member directing the student and two others, one of whom may come from outside the Department of Biology.

Students interested in the Biology Honors Program should discuss this opportunity with their advisors as early as possible so that they have achieved the necessary GPA and are prepared to make application for the program in the spring of their sophomore year. This program, though designed for all qualified students within the Department of Biology, should be of particular value to students intending to seek admission to graduate or professional schools. Honors coursework is designated on university transcripts. Students completing the departmental honors program are recognized at departmental commencement ceremonies.

### **Accelerated M.S. Track**

The Department of Biology offers an accelerated curriculum that provides an alternative pathway for progression through the requirements for the Master of Science degree with a major in Biology. Although a graduate program, the Accelerated Track begins during and overlaps with the undergraduate program. By taking advantage of this track, a highly motivated undergraduate student can, with appropriate planning beginning in the junior year, tailor his or her curriculum to complete the requirements for both the B.S.-Biology and M.S.-Biology in a total of five calendar years. Upon completion of this accelerated program, students will be prepared for skilled technical positions in the industrial or academic workforce or for advanced study in outstanding graduate or professional schools. Undergraduate students should consult the *IUP Graduate Catalog* or contact the Biology Department Graduate Coordinator for more information.

### **Certificate in Cell and Molecular Biology**

#### **N. Bharathan, Coordinator**

For students who wish to obtain specialized training in cell and molecular biology without electing the major track, the Department of Biology offers a 15-credit certificate program that consists of four core courses and one elective course. Completion of the certificate will help to prepare students for positions in the modern biotechnology workforce. Applications are available at 114 Weyandt Hall. For more information, call 724-357-2352.

### **Foreign Language Requirement**

Some Biology majors must complete intermediate-level or two semesters of foreign language starting at the highest level recommended by the freshman Preregistration Placement Test in that language (may be included in Liberal Studies electives). This requirement can also be met by demonstrating proficiency in a foreign language equivalent to the intermediate level. See individual tracks and programs for specific requirements.

### **Cooperative Programs**

The department cooperates in programs with Duke University School of Forestry and Environmental Studies, Jefferson Medical College, Lake Erie College of Osteopathic Medicine, and Pymatuning Laboratory of Ecology.

**Duke Cooperative College Program in Forestry and Environmental Studies:** The Cooperative College program with the Nicholas School of the Environment at Duke University ([www.env.duke.edu](http://www.env.duke.edu)) is designed to coordinate the undergraduate education of students at IUP with graduate programs in the areas of resources and environment offered at Duke. Undergraduate majors in one of the natural sciences, mathematics, economics, business, or political science are suited to the program. Preparation for this program should include at least one year each of biology with work in botany, economics with a significant component of microeconomics, and

mathematics, which should include calculus, computer science, and statistics. Applicants to the Duke program who have completed courses in ecology, chemistry, geology, physics, and a foreign language or additional courses in biology, economics, and mathematics will be given preferential consideration. Students are accepted in either of two degree programs at Duke: the Master of Forestry or Master of Environmental Management.

Students may be accepted into the Duke graduate program after three years of high-quality undergraduate study at IUP or upon completion of the baccalaureate. Students who qualify after three years will have completed most of the undergraduate degree requirements at IUP except for total hours. Courses at Duke will be applied to the bachelor's degree at IUP.

### **Jefferson Medical College, Physician Shortage Area Program**

**(PSAP):** IUP is a participating affiliate of the PSAP, established by Jefferson Medical College of Thomas Jefferson University in Philadelphia, for the purpose of improving the distribution of physicians in Pennsylvania. The program is designed to increase the opportunities for young women and men to practice medicine in rural communities of Pennsylvania which are severely underserved. To be eligible for this special program, you must be from a rural area or have spent a significant amount of time living in a rural environment. Students interested in this program should enroll as Biology Pre-Medical majors.

This program will admit approximately four graduates of IUP and twenty graduates of other colleges each year. Students from IUP will be admitted only if properly qualified according to the admission standards and policies of Jefferson Medical College. Applications are reviewed by the Joint IUP-Jefferson Subcommittee and recommendations are made to the Jefferson Committee on Admissions.

*Admission to Jefferson Medical College:* A strong preparation in the sciences and mathematics basic to medical school studies is required. A variety of college course formats and combinations, including biology, general and organic chemistry, and physics are a minimum. Courses taken to meet the basic requirements should be rigorous and, in general, comparable to courses accepted for concentration in these disciplines. Courses taken should be supplemented by laboratory experiences. Students may take upper-level science courses out of educational interest or to fulfill the requirements of their major. Taking additional science courses that cover material taught within the medical school curriculum is not helpful to gaining admission.

Breadth of education is expected. Pursuit of some discipline in depth is encouraged. A successful medical student must actively acquire, synthesize, apply, and communicate information. These are skills that can be developed through a great variety of academic disciplines. Studies in the humanities and the social and behavioral sciences and development of effective writing skills are strongly suggested. Additional requirements for admission can be found in "Information for Prospective Students," published by Jefferson Medical College.

Students who qualify for this program must certify their intentions to adhere to the following: a) complete the curriculum during their four years of medical education at Jefferson Medical College, including a six-week clerkship in a rural area, and b) agree to practice medicine in an underserved area. Preference will be given to Pennsylvania residents who are interested in this program, with highest priority given to those who actually live, at the time of application, in the underserved area in which they hope to practice.

**Osteopathic Medicine:** IUP has "Early Acceptance" agreements with both **Philadelphia College of Osteopathic Medicine (PCOM)** and **Lake Erie College of Osteopathic Medicine (LECOM)**. These programs allow qualifying students to *gain provisional acceptance into the medical college* as long as they maintain a GPA of 3.2 or better in the Biology Pre-medical Curriculum at IUP and score no lower than 7 on each section of the MCAT. These programs are also known as "3+4" programs, since you may elect to enter the medical school after just three years at IUP. Students are awarded a Bachelor of Science degree with a major in Biology from IUP upon successful completion of the first-year curriculum at LECOM or PCOM and their undergraduate requirements at IUP.

In order to be considered for either of the “Early Acceptance” programs, students must be in the top twenty-five percent of their graduating class, have a minimum SAT score (Math + Verbal) of 1150 (recentered) or minimum ACT score of 25, and have additional evidence of scholarly/professional potential, leadership, and community involvement.

**Pymatuning Laboratory of Ecology:** Biology majors can expand their selection of course offerings by participating in a cooperative program with the University of Pittsburgh’s Field Station at the Pymatuning Laboratory of Ecology located in northwestern Pennsylvania. These elective courses center on ecological and environmental topics and vary annually. Application and registration for both summer sessions must be completed by April 1. Students usually register for credit and pay fees at IUP. Books, lab fee, and room and board are paid to the Pymatuning Laboratory of Ecology. The faculty advisor for this program assists students in program planning, application, and registration.

### Degree Programs

In the programs of study that follow, no more than a total of 6 credits from internships, independent study, and special topics can be counted toward biology course requirements. Credits beyond 6 earned from these sources are counted as general electives. Note: Students changing into the majors of Biology or Biology Education are required to have a 2.5 cumulative GPA or permission of the chairperson.

#### Bachelor of Arts–Biology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121 or 217

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 3cr, no courses with BIOL prefix

**Major:** 32

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr

**Controlled Electives:**

Biology electives (major courses only) 12cr (1)

**Other Requirements:** 23-24

PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr

**Ancillary Science Courses:**

An additional 4-5 cr from the following (2, 3): 4-5cr

- BIOC: 301, 302, 311, 312
- CHEM: 231, 232, 321, 323, 351
- GEOS: 121 and 122, 131 and 132, 141, 310, 330, 331, 361
- MATH: 122, 216 or 217 (2), 417, 418
- PHYS: 112 and 122, 151

**Planned Program in Complementary Field** (requires advisor approval) with at least 6cr in 300/400-level courses (4) 15cr

**Other Requirements:** 0-6  
Foreign Language Intermediate Level 0-6cr (5)

**Free Electives:** 10-17

**Total Degree Requirements:** 120

- (1) No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
- (2) If MATH 121 (4cr) is elected as the Liberal Studies MATH course, the additional requirement is 4cr; if MATH 217 (3cr) is elected, the additional requirement is 5cr. The mathematics course counted in Liberal Studies cannot also count in ancillary courses.
- (3) Other appropriate major courses in the above departments may be substituted for one or more of those on the above list with the approval of the student’s advisor.

- (4) Recommended complementary fields include Anthropology, Art, Business, Chemistry, Communications Media, Computer Science, Criminology, Dietetics, Economics, English, Foreign Language, Geography, Geoscience, Journalism, Mathematics, Physics, Political Science, Psychology, Regional Planning, or Safety Sciences. Some courses in complementary field may also fulfill Liberal Studies requirements (see Liberal Studies section). However, if complementary field selected is Chemistry, Geoscience, Mathematics, or Physics, courses used to fulfill the ancillary science requirement above may not be applied to the complementary field requirement of 15cr.
- (5) Two courses beyond placement or intermediate level.

#### Bachelor of Science–Biology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121 or 217

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 3cr, no courses with BIOL prefix

**Major:** 38

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr

**Controlled Electives:**

Biology electives (major courses only) 18cr (1)

**Other Requirements:** 24-25 (2)

PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr

**Ancillary Science Courses:**

An additional 20-21cr from the following (3, 4): 20-21cr

- BIOC: 301, 302, 311, 312
- CHEM: 231, 232, 321, 323, 351
- GEOS: 121 and 122, 131 and 132, 141, 310, 330, 331, 361
- MATH: 122, 216 or 217 (3), 417, 418
- PHYS: 112 and 122, 151

**Other Requirements:** 0-6

Foreign Language Intermediate Level 0-6 cr (5)

**Free Electives:** 3-10

**Total Degree Requirements:** 120

- (1) No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
- (2) 21cr if the student elects MATH 121 in Liberal Studies or 22cr if the student elects to take MATH 217.
- (3) If MATH 121 (4cr) is elected as the Liberal Studies MATH course, the additional requirement is 20cr; if MATH 217 (3cr) is elected, the additional requirement is 21cr. The mathematics course counted in Liberal Studies cannot also count in ancillary courses.
- (4) Other appropriate major courses in the above departments may be substituted for one or more of those on the above list with the approval of the student’s advisor.
- (5) Two courses beyond placement or intermediate level. In lieu of a foreign language, students in programs or tracks other than the Pre-Medical Track and the Pre-Veterinary Track may elect to take a sequence of courses in either Computer Science, exclusive of COSC 101 (COSC 110 and 210 recommended), or Regional Planning (from the following: RGPL 213, 314, 316, 415).

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**Bachelor of Science—Biology/Cell and Molecular Biology Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 3cr, PHYS 111, no courses with BIOL prefix

**Major:** 38

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 123	Perspectives in Cell and Molecular Biology	1cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr
BIOL 401	Laboratory Methods in Biology and Biotechnology	3cr
BIOL 410	Molecular Biology Topics	3cr

**Controlled Electives:** (1) 11cr

BIOL 151, 269, 271, 281 (2), 323, 331, 352, 362, 363, 364, 453, 460, 466, 476, 477, 481 (2), 482 (2), 493 (2)

**Ancillary Science Requirements:** 24

**Organic Chemistry Sequence:**

CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr

**Biochemistry Sequence:**

BIOC 301	Biochemistry I	3cr
BIOC 302	Biochemistry II	3cr
BIOC 311	Biochemistry Laboratory I	1cr
BIOC 312	Biochemistry Laboratory II	1cr

**Other Science/Mathematics Requirements:**

PHYS 121	Physics I Lab	1cr
MATH 217	Probability and Statistics	3cr

**Science/Mathematics Elective:**

An additional 4cr in ancillary science/mathematics from the following: BIOC 480, 481, CHEM 321, 323, 331, 340, MATH 122, PHYS 112, 122 4cr (3)

**Other Requirements:** 0-6  
Foreign Language Intermediate Level 0-6 cr (4)

**Free Electives:** 4-10

**Total Degree Requirements:** 120

- (1) No more than 6cr total from Independent Study, Special Topics, Internship applies to major; excess applied as free electives.
- (2) No more than 3cr may count toward Controlled Elective requirements.
- (3) Other appropriate majors courses in these departments may be substituted for one or more of those on the above list with the approval of the student's advisor.
- (4) Two courses beyond placement or intermediate level. Foreign Language course may count as Liberal Studies Elective (see Liberal Studies section). In lieu of a foreign language the student may elect to take a sequence of courses in Computer Science exclusive of COSC 101 (COSC 110 and 210 recommended).

---

**Bachelor of Science—Biology/Pre-Veterinary Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 3cr, PSYC 101, no courses with BIOL prefix

**Major: Required Courses:** 38

**Biology Core Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 210	Botany	3cr

BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr

**Additional Required Biology Courses:**

BIOL 242	Comparative Vertebrate Anatomy	3cr
BIOL 331	Animal Developmental Biology	3cr
BIOL 352	Comparative Animal Physiology	3cr

**Controlled Biology Electives:** BIOL 151, 269, 271, 363, 364, 401, 405, 453, 466, 476, 477, 481, 482, 493 9cr (1)

**Ancillary Science Requirements:** 20

**Chemistry Sequence:**

CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 351	Biochemistry	4cr

**Physics Sequence:**

PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Laboratory	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Laboratory	1cr

**Mathematics:** 3

MATH 216 Probability and Statistics for Natural Sciences 3cr

**Other Requirements:** 0-6

Foreign Language Intermediate Level 0-6 cr

**Free Electives:** 4-10

**Total Degree Requirements:** 120

(1) No more than 6cr total from Independent Study, Special Topics, and Internship applies to major; excess applied as free electives.

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**Bachelor of Science—Biology/Pre-Medical Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 3cr, no courses with BIOL prefix

**Major: Required Courses** 38

**Biology Core Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr

**Additional Required Biology Courses:**

BIOL 242	Comparative Vertebrate Anatomy	3cr
BIOL 331	Animal Developmental Biology	3cr
BIOL 352	Comparative Animal Physiology	3cr

**Controlled Biology Electives:** BIOL 151, 269, 271, 363, 364, 401, 405, 453, 466, 476, 477, 481, 482, 493 9cr (1)

**Ancillary Science Requirements:** 20

**Chemistry Sequence:**

CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 351	Biochemistry	4cr

**Physics Sequence:**

PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Laboratory	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Laboratory	1cr

**Mathematics:** 3

MATH 216 Probability and Statistics for Natural Sciences 3cr

**Other Requirements:** 0-6

Foreign Language Intermediate Level 0-6 cr

<b>Free Electives:</b>	4-10	<b>Major: Required Courses:</b>	40
<b>Total Degree Requirements:</b>	120	<b>Biology Core Courses:</b>	
(1) No more than 6cr total from Independent Study, Special Topics, and Internship applies to major; excess applied as free electives.		BIOL 111 Principles of Biology I	4cr

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### Bachelor of Science–Biology/Ecology, Conservation, and Environmental Biology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Mathematics:** MATH 121

**Natural Science:** CHEM 111 and 112

**Social Science:** ECON 101

**Liberal Studies Electives:** 3cr, MATH 216 or 217

**Major:** 36-37

**Required Courses:**

BIOL 111 Principles of Biology I	4cr
BIOL 112 Principles of Biology II	4cr
BIOL 210 Botany	3cr
BIOL 220 General Zoology	3cr
BIOL 250 Principles of Microbiology	3cr
BIOL 263 Genetics	3cr
BIOL 271 Evolution	3cr
BIOL 272 Conservation of Plant and Animal Resources	3cr
BIOL 362 Ecology	3cr
BIOL 480 Biology Seminar	1cr
BIOL 480 Biology Seminar	1cr
BIOL 490 Field Studies in Biology	3cr

**Independent Study or Internship**

Must take one of the following:

BIOL 483 Honors Thesis/Independent Study	2cr
BIOL 493 Biology Internship	3cr
BIOL 499 Biology Research	3cr

**Other Requirements:** 26-32

**Required courses:**

GEOS 201 Foundations of Geology	4cr
PHYS 111 Physics I Lecture	3cr
PHYS 121 Physics I Lab	1cr

**Controlled Electives:** 18cr

Select 18cr from the following: BIOL 251, 252, 261, 262, 281, 310, 425, 450, 455, 456, 463, 471, 473, 475, 480, 481, 482, 483, 484, 490; CHEM 231, 232, 323, 351; COSC 105, 110; ECON 361; ENVH 221, 456; GEOG 343, 345, 419; GEOG/RGPL 213, 314, 316, 415, 417, 440, 464; GEOS 310; MATH 122; PHYS 112, 122; RGPL 350, 458

**Foreign Language:** 0-6cr

Two courses beyond placement or intermediate level. In lieu of a foreign language the student may elect to take a sequence of courses in either Computer Science (exclusive of COSC/IFMG 101; COSC 110 and COSC 210 recommended) or Regional Planning from the list of controlled electives (or with permission of advisor.)

**Free Electives:** 2-9

**Total Degree Requirements:** 120

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### Bachelor of Science–Biology/Environmental Health Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Social Science:** ECON 101, PSYC 101 or SOC 151, nonwestern culture required

**Liberal Studies Electives:** 3cr, BTED/COSC/IFMG 101, no courses with BIOL prefix

**Major: Required Courses:** 40

**Biology Core Courses:**

BIOL 111 Principles of Biology I	4cr
BIOL 112 Principles of Biology II	4cr
BIOL 210 Botany	3cr
BIOL 220 General Zoology	3cr
BIOL 250 Principles of Microbiology	3cr
BIOL 263 Genetics	3cr

**Additional Required Biology Courses:**

BIOL 151 Human Physiology	4cr
BIOL 221 Environmental Health and Protection	4cr
BIOL 323 Introduction to Toxicology and Risk Assessment	3cr
BIOL 460 Fundamentals of Environmental Epidemiology	3cr

**Controlled Biology Electives:** 6cr (1)

BIOL 262, 270, 310, 363, 466, 476, 481, 482, 483, 484, 493

**Other Requirements:** 24

CHEM 231 Organic Chemistry I	4cr
CHEM 351 Biochemistry	4cr
MATH 216 Probability and Statistics for Natural Sciences	3cr
PHYS 111 Physics I Lecture	3cr
PHYS 121 Physics I Lab	1cr

**Ancillary Science and Technical Electives:** 9cr

CHEM 232, 323  
 GEOG/RGPL 415, 417, GEOG: 419, 425  
 GEOS 201, 202, 312, 313  
 MATH 122  
 PHYS 112 and 122  
 SAFE 330, 430

**Other Requirements:** 0-6

Foreign Language Intermediate Level (2) 0-6cr

**Free Electives:** (3) 2-8

**Total Degree Requirements:** 120

- (1) No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
  - (2) Two courses beyond placement or intermediate level. Foreign Language course may count as Liberal Studies Elective (see Liberal Studies section). In lieu of a foreign language, the student may elect to take a sequence of courses in either Computer Science, exclusive of COSC 101 (COSC 110 and 210 recommended), or Geography/Regional Planning (from the following: GEOG/RGPL 213, 314, 316, or 415).
  - (3) Recommended free electives: MGMT 310; PLSC 250, 370; SAFE 101, 220, 410.
- 

### Bachelor of Science in Education–Biology (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 55

**Mathematics:** MATH 110 or 121

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Liberal Studies Electives:** 10cr, MATH 217, PHYS 151, 161, one course with GEOS prefix (Option II) Nonlaboratory list; no courses with BIOL prefix

**College of Education:** 31

**Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology	3cr
EDSP 102 Educational Psychology	3cr

**Professional Education Sequence:**

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323 Instruction of English Language Learners with Special Needs	2cr
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242 Pre-Student Teaching Clinical Experience I	1cr
EDUC 342 Pre-Student Teaching Clinical Experience II	1cr

EDUC 441	Student Teaching (1)	12cr
EDUC 442	School Law	1cr
EDUC 451	Teaching Science in the Secondary School	3cr

**Major:** 29

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr
BIOL 480	Biology Seminar	1cr

**Controlled Electives:** (1)  
Biology electives: (major courses only) 8cr

**Other Requirements:** 8

**Chemistry Sequence:**

CHEM 231	Organic Chemistry I	4cr
CHEM 351	Biochemistry (2)	4cr

**(#) Total Degree Requirements:** 123

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

- (1) No more than 6cr from BIOL 482, 481, or 493 applies to major; excess applied as free electives.
- (2) The two-semester (6cr) sequence of BIOC 301-302 can be substituted for CHEM 351 to meet the biochemistry requirement.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

**Minor-Biology** 20

**Required Courses:**

BIOL 103-104	General Biology I and II <i>or</i>	
BIOL 111-112	Principles of Biology I and II	8cr
Additional BIOL courses (1, 2)		12cr

**Other Requirements:**

Student must have at least a 2.0 GPA in all BIOL courses for the minor.

Student must take at least 6cr of biology courses at IUP.

Must have permission of Biology Department chairperson.

- (1) With approval of department chairperson.
- (2) At least 8 of the 12 required additional BIOL cr must come from 200-level or higher courses.

**Biology Honors Track** 9

BIOL 484	Honors Seminar	2cr (1)
BIOL 483	Honors Thesis/Independent Study	4cr (1, 2)
BIOL 5XX/6XX	Graduate-level course	3cr (3)

- (1) May be counted toward the B.A., B.S., and B.S.Ed. in Biology majors.
- (2) Two semesters, 2cr each.
- (3) Students must take one course at the 500/600 level during their junior or senior year. This will be in addition to the biology credits (currently 38 for all tracks) required for the major.

**Certificate in Cell and Molecular Biology** 15

**Core Courses:** 12

BIOL 401	Laboratory Methods in Biology/Biotechnology	3cr
BIOL 405	Biology of the Cell	3cr
BIOL 410	Molecular Biology Topics	3cr
BIOL 466	Principles of Virology	3cr

**Elective Course:**

One course from the following: 3

BIOL 323	Introduction to Toxicology and Risk Assessment	3cr
BIOL 364	Immunology	3cr
BIOL 460	Fundamentals of Environmental Epidemiology	3cr
BIOL 481	Biology Special Topics	3cr

**Biochemistry Program**

**Website:** [www.iup.edu/biochemistry](http://www.iup.edu/biochemistry)

**N. Bharathan, Coordinator;** Hinrichsen, Luciano, Sowa, Villemain, Biology and Chemistry faculties; and professors emeriti Butler, Harding

The B.S. degree with a major in Biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments. This Biochemistry Program also offers a minor in Biochemistry.

The curriculum leading to a B.S. degree with a major in Biochemistry begins with foundation courses in biology, chemistry, mathematics, and physics in the first two years. Specialization in biochemistry commences in the third year with courses in biochemistry, genetics, physical chemistry, Special Topics in Biochemistry, and Biochemistry Seminar.

A unique feature of this undergraduate program is that Biochemistry research is a requirement. After consultation with faculty, the students will define a problem and devise an experimental plan through library research. Laboratory research will be done under the direct supervision of a faculty member. Finally, the student will report on the results of the research in both written and oral forms.

This program is intended for students whose interests lie in a most exciting field of modern science. Graduates can expect to be qualified to enter graduate programs in biochemistry, biology, chemistry, and molecular biology, professional schools in the health sciences, and positions in industrial and government research laboratories and in industrial production facilities.

**Bachelor of Science-Biochemistry**

**Liberal Studies:** As outlined in the Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125 and 126

**Natural Science:** PHYS 131-141 and 132-142

**Liberal Studies Electives:** 0cr

**Major:** 51

**Required Courses:**

BIOC 301	Biochemistry I	3cr
BIOC 302	Biochemistry II	3cr
BIOC 311	Biochemistry Laboratory I	1cr
BIOC 312	Biochemistry Laboratory II	1cr
BIOC 401	Laboratory Methods in Biology and Biotechnology	3cr
BIOC 480	Biochemistry Seminar I	1cr (1)
BIOC 481	Special Topics in Biochemistry	3cr
BIOC 482	Independent Research in Biochemistry	2cr
BIOC 490	Biochemistry Seminar II	1cr (1)
BIOL 111	Principles of Biology I	4cr
BIOL 250	Principles of Microbiology	3cr
BIOL 263	Genetics	3cr
CHEM 113	Concepts in Chemistry I	4cr
CHEM 114	Concepts in Chemistry II	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 323	Analytical Methods	4cr
CHEM 340	Physical Chemistry for the Biological Sciences	3cr

**Controlled Electives:**

Two courses from the following: 6-8

- Any 300- or 400-level BIOC/BIOL/CHEM courses
- |          |   |
|----------|---|
| COSC 110 | Problem Solving and Structured Programming      |
| MATH 216 | Probability and Statistics for Natural Sciences |



<b>Other Requirements:</b>	3
MATH 225 Calculus III/Physics, Chemistry, Mathematics	
<b>Free Electives:</b>	10-12
<b>Total Degree Requirements:</b>	120
(1) 1cr each semester of senior year.	

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### Minor–Biochemistry 17-20

Total credits will depend on the controlled electives used (9cr minimum required to 12cr for three 4-cr electives).

<b>Required Courses:</b>	8
BIOC 301 Biochemistry I (1a)	3cr
BIOC 302 Biochemistry II	3cr
BIOC 311 Biochemistry Laboratory I (1a)	1cr
BIOC 312 Biochemistry Laboratory II	1cr

<b>Other Requirements:</b>	9-12
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At least three controlled electives from following: (1)

BIOC 480 Biochemistry Seminar I	1cr
BIOC 481 Special Topics in Biochemistry	1-3cr
BIOC 490 Biochemistry Seminar II	1cr
BIOL 250 Principles of Microbiology (1b, d)	3cr
BIOL 263 Genetics (1b)	3cr
BIOL 350 Cellular Physiology	3cr
BIOL 352 Comparative Animal Physiology (1d)	3cr
BIOL 364 Immunology (1d)	3cr
BIOL 401 Laboratory Methods in Biology and Biotechnology (1d)	3cr
BIOL 453 Plant Physiology (1d)	3cr
CHEM 232 Organic Chemistry II (1c)	4cr
CHEM 322 Instrumental Analysis (1c, d)	4cr
CHEM 323 Analytical Methods	4cr

- (1) Or other 200-level or higher Biology or Chemistry courses with permission of chairperson of offering department. A minimum of 9cr is required.
- BIOL 111 and CHEM 232 are prerequisites.
  - Required for Biology major.
  - Required for Chemistry major.
  - These courses have prerequisites not needed for the required courses.

## Department of Chemistry

**Website:** [www.iup.edu/chemistry](http://www.iup.edu/chemistry)

**George R. Long, Chairperson;** Briggs, Elcesser, Ford, Ko, Kondo, Kupchella, Kyler, Lake, LeBlond, Long, McElroy, See, Southard, Sowa, Villemain; and professors emeriti Costa, Crumm, Fazio, Harding, Marks, McKelvey, Patsiga, Ramsey, Sroxton, Syty, Tackett, Varughese, Woolcock, Wunz, Zambotti

Degrees offered by the Department of Chemistry are the Bachelor of Science with a Chemistry major, the Bachelor of Science with a Chemistry/Pre-Medical Track, the Bachelor of Arts with a Chemistry major, and the Bachelor of Science in Education with a Chemistry major. A Pre-Medical concentration is available in the B.A. curricula. Preparatory programs for other professional schools can be developed for either degree. A minor in chemistry is also offered.

The B.S. degree with a Chemistry major is a professional degree and is certified by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to pursue graduate studies leading to the M.S. or Ph.D. degree in chemistry, biochemistry, materials science, forensic science, or an associated field. The Pre-Medical Track includes all courses required for entrance into medical school and gives the student the flexibility of choosing medical school or graduate school after graduation.

The curriculum leading to the B.A. degree with a Chemistry major is designed to allow for the workable union of other disciplines with chemistry

in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A careful selection of electives will qualify the student for entrance into many fields in which there is an acute need for persons with scientific training, and, at the same time, satisfy the entrance requirements of various professional and graduate schools. This degree may also be of interest to students who have completed a significant number of credits in another degree program and decide they want to earn a degree in chemistry. The Pre-Medical concentration includes all courses required for entrance into medical school.

The B.A. degree with a Chemistry major can incorporate a complementary program in almost any other field in the university; some disciplines which make useful combinations include biology, business administration, computer science, criminology (forensic science), English (technical writing), geoscience, government, physics, and safety science. In particular, a student seeking a career in forensic science should major in chemistry.

Either degree in chemistry provides excellent preparation for entrance into a variety of professional schools, including dental, veterinary, pharmacy, chiropractic, and law. The student considering going to one of these professional schools after completion of a chemistry degree should work closely with his or her advisor and select additional courses as required by the professional school.

The curriculum leading to the B.S.Ed. degree with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified coursework and the requirements of the teacher certification process, the student is eligible for Pennsylvania certification by the Pennsylvania Department of Education.

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### Bachelor of Arts–Chemistry

**Liberal Studies:** As outlined in Liberal Studies section 48 with the following specifications:

**Mathematics:** MATH 125

**Natural Science:** PHYS 111-121 and 112-122 *or* PHYS 131-141 and 132-142

**Liberal Studies Electives:** 3cr, no courses with CHEM prefix

**Major:**  
30-33

**Required Courses:**

CHEM 113 Concepts in Chemistry I	4cr
CHEM 114 Concepts in Chemistry II	4cr (1)
CHEM 214 Intermediate Inorganic Chemistry	2cr
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II	4cr
CHEM 321 Quantitative Analysis	4cr
CHEM 341 Physical Chemistry I	4cr
CHEM 343 Physical Chemistry Laboratory I	1cr

**Controlled Electives (2)**

At least 3cr from the following: CHEM 301, 322, 335, 342, 3-6cr  
CHEM 351, 410, 411, BIOC 301, 302, 311

**Other Requirements:**

MATH 126 Calculus II/Physics, Chemistry, Mathematics	3cr	21-24
MATH 225 Calculus III/Physics, Chemistry, Mathematics	3cr	
Planned program (with advisor approval) in complementary field of at least 15cr, with at least 6cr of 300/400-level courses (3)		15cr
Foreign Language Intermediate Level (4)	0-3cr	

**Free Electives:**

15-21

**Total Degree Requirements:**

120

- CHEM 111 and 112 can be substituted for CHEM 113 and 114.
- Students electing a concentration in Pre-Medicine must take CHEM 351 (4cr) or BIOC 301 and 302 (6cr).
- Students electing a concentration in Pre-Medicine must take BIOL 111, 151, 263, 331 and a 300-level BIOL elective.
- Intermediate-level foreign language may be included as Liberal Studies elective.

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## Bachelor of Science—Chemistry

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125

**Natural Science:** PHYS 131-141 and 132-142

**Liberal Studies Electives:** 3cr, no courses with CHEM prefix

**Major:** 45

**Required Courses:**

CHEM 113	Concepts in Chemistry I	4cr
CHEM 114	Concepts in Chemistry II	4cr (1)
CHEM 214	Intermediate Inorganic Chemistry	2cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 301	Introduction to Chemical Research	1cr
CHEM 321	Quantitative Analysis	4cr
CHEM 322	Instrumental Analysis	4cr
CHEM 341	Physical Chemistry I	4cr
CHEM 342	Physical Chemistry II	3cr
CHEM 343	Physical Chemistry Laboratory I	1cr
CHEM 344	Physical Chemistry Laboratory II	1cr
CHEM 410	Advanced Inorganic Chemistry Laboratory	1cr
CHEM 411	Advanced Inorganic Chemistry	3cr
CHEM 498	Problems in Chemistry	2cr

**Controlled Electives:** (2)

Additional Chemistry electives from the following: 3cr  
CHEM 331, 335, 421, 441, 481

**Other Requirements:** 16-20

BIOC 301	Biochemistry I	3cr
BIOL 111	Principles of Biology I	4cr
MATH 126	Calculus II/Physics, Chemistry, Mathematics	3cr
MATH 225	Calculus III/Physics, Chemistry, Mathematics	3cr
One additional mathematics elective from the following:		
MATH 171, 216, 241, 342		3-4cr
Foreign Language Intermediate Level (3)		0-3cr

**Free Electives:** 7-11

**Total Degree Requirements:** 120

- (1) CHEM 111 and 112 can be substituted for CHEM 113 and 114.
  - (2) Qualifying students can also use 500- or 600-level CHEM courses to meet this requirement.
  - (3) Intermediate-level Foreign Language may be included in Liberal Studies elective.
- 

## Bachelor of Science—Chemistry/Pre-Medical Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125

**Natural Science:** PHYS 131-141 and 132-142

**Liberal Studies Electives:** 4cr, MATH 126, no courses with CHEM prefix

**Major:** 45

**Required Courses:**

CHEM 113	Concepts in Chemistry I	4cr
CHEM 114	Concepts in Chemistry II	4cr (1)
CHEM 214	Intermediate Inorganic Chemistry	2cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 301	Introduction to Chemical Research	1cr
CHEM 321	Quantitative Analysis	4cr
CHEM 322	Instrumental Analysis	4cr
CHEM 341	Physical Chemistry I	4cr
CHEM 342	Physical Chemistry II	3cr
CHEM 343	Physical Chemistry Laboratory I	1cr
CHEM 344	Physical Chemistry Laboratory II	1cr

CHEM 410	Advanced Inorganic Chemistry Laboratory	1cr
CHEM 411	Advanced Inorganic Chemistry	3cr
CHEM 498	Problems in Chemistry	2cr

**Controlled Electives:** (2)

Additional Chemistry electives from the following: 3cr  
CHEM 331, 335, 421, 441, 481

**Other Requirements:**

BIOC 301	Biochemistry I (3)	3cr	23-28
BIOL 111	Principles of Biology I	4cr	
BIOL 151	Human Physiology	4cr	
BIOL 263	Genetics	3cr	
BIOL 331	Animal Developmental Biology	3cr	
MATH 225	Calculus III/Physics, Chemistry, Mathematics	3cr	
One additional mathematics elective from the following:			
MATH 171, 216, 241, 342		3-4cr	
Foreign Language Intermediate Level		0-4cr	

**Free Electives:** 0-4

**Total Degree Requirements:** 120

- (1) CHEM 111 and 112 can be substituted for CHEM 113 and 114.
  - (2) Qualifying students can also use 500- or 600-level CHEM courses to meet this requirement.
  - (3) CHEM 351 may be substituted for BIOC 301.
- 

## Bachelor of Science in Education—Chemistry (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** MATH 123, 124

**Natural Science:** PHYS 111-121 and 112-122

**Social Science:** PSYC 101

**Liberal Studies Electives:** 0cr

**College:** 29

**Preprofessional Education Sequence:**

COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Professional Education Sequence:**

EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 441	Student Teaching	12cr
EDUC 442	School Law	1cr
EDUC 451	Teaching Science in the Secondary School	3cr

**Major:** 32

**Required Courses:**

CHEM 113	Concepts in Chemistry I (1)	4cr
CHEM 114	Concepts in Chemistry II (1)	4cr
CHEM 214	Intermediate Inorganic Chemistry	2cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 321	Quantitative Analysis	4cr
CHEM 341	Physical Chemistry I	4cr
CHEM 343	Physical Chemistry Laboratory I	1cr
CHEM 499	Problems in Chemistry Education	1cr

**Controlled Electives:** (2)

Select 4cr from the following:  
CHEM 322, 342, 344, 351, 410, 411; BIOC 301, 311

**Other Requirements:**

BIOL 111	Principles of Biology	4cr	8
GEOS 111	Earth Science for Educators I <i>or</i>		
GEOS 113	Earth Science for Educators II	3cr	
GEOS 112	Earth Science for Educators I Lab <i>or</i>		
GEOS 114	Earth Science for Educators II Lab	1cr	

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<b>Free Elective:</b>	1
<b>(#) Total Degree Requirements:</b>	120
(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Educational Technology section of this catalog.	
(1) CHEM 111 and 112 can be substituted for CHEM 113 and 114.	
(2) A minimum of 6cr of Controlled Electives, including either CHEM 351 or BIOC 301, is required for the ACS-certified degree in Chemistry Education.	
(#) See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation.	

## Minor—Chemistry 20

### Required Courses:

CHEM 111	General Chemistry I <i>or</i>	4cr
	CHEM 113 Concepts in Chemistry I	
CHEM 112	General Chemistry II <i>or</i>	4cr
	CHEM 114 Concepts in Chemistry II	
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
At least 4 additional cr from the following:		
CHEM 321, 323, 341, 351		4cr

## Department of Computer Science

**Website:** [www.iup.edu/compsci](http://www.iup.edu/compsci)

**William W. Oblitey, Chairperson;** Ali, Deb, Ezekiel, Farag, Fries, O’Neil, Shumba, Smith; and professor emeritus Wolfe

The programs in Computer Science at IUP lead to the B.S. or B.A. degree and are designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer software development, scientific and applied mathematical programming, and other computer-related areas and have gone to graduate school.

In a rapidly developing field such as Computer Science, it is important that the graduate’s education be broad and fundamental so that new trends can more readily be followed. Our goal is to balance fundamentality and breadth with sufficient supervised practice so that our graduates are productive at the time they graduate but ready and willing to change with the field.

The Computer Science Department, working with their Corporate Advisory Board, has identified objectives of a Computer Science professional over the length of their career (Program Educational Objectives). These Program Educational Objectives can be found at the departmental website [www.iup.edu/compsci](http://www.iup.edu/compsci).

We encourage Computer Science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other disciplines at IUP are also welcome to take Computer Science courses for which they are qualified or to complete a Computer Science minor or Information Assurance Minor.

Students in a Computer Science track should set their goals beyond simple programming and should be preparing to:

1. apply computer science knowledge to application areas from science and industry.
2. apply appropriate data structures and algorithms to analyze and solve new problems.
3. apply software engineering techniques to designing, implementing, documenting, testing, and maintaining software systems.
4. contribute to improving the design and implementation of databases.
5. use more than one programming language and choose an appropriate one for the project.
6. work with and communicate effectively with professionals in various fields.

7. continue a lifelong professional development in computing.
8. act ethically and professionally.

There are additional goals for students dependent on the track they choose.

### Bachelor of Arts—Computer Science

A graduate of this track will be prepared to:

1. apply knowledge of computing to an area not usually associated with computer science.
2. be particularly effective in communicating with others of different cultural and educational background regarding computing issues.
3. be employed in entry-level positions in business.

### Bachelor of Science—Computer Science/Applied Computer Science Track

A graduate of this track will be prepared to:

1. develop Web-based applications and interfaces.
2. work with all types of computer systems—legacy, current, and future.
3. apply knowledge of computing to an area of secondary interest (dependent on the minor taken).
4. work with a variety of software tools in designing and implementing computer-based systems.
5. manage activities that are strongly computer-system dependent.
6. be employed at entry-level through project leader positions.

### Bachelor of Science—Computer Science/Languages and Systems Track

A graduate of this track will be prepared to:

1. improve: a) the software tools that programmers and analysts use, b) operating systems, c) Web-based applications and interfaces, and d) networks and system security.
2. develop: a) better languages for communicating with computers and b) software that takes computer organization into account, and c) enter graduate studies.

### Bachelor of Science—Computer Science/Information Assurance Track

A graduate of this track will be prepared to:

1. work with business personnel to implement information security policy.
2. work with law enforcement personnel at all levels to prevent information security violations and prosecute those who attack computer systems.
3. manage security in network systems.
4. increase the public’s knowledge of information assurance issues.
5. establish procedures that provide information assurance in computer systems for which s/he is responsible.
6. contribute to improving secure data communications.
7. strengthen the security of application programs.

### Bachelor of Arts—Computer Science

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125 (1)

**Liberal Studies Electives:** 3cr, MATH 216, no courses with COSC prefix

**Major:** 37

#### Required Courses:

COSC 105	Fundamentals of Computer Science	3cr
COSC 110	Problem Solving and Structured Programming	3cr
COSC 210	Object-Oriented and GUI Programming	3cr
COSC 220	Applied Computer Programming	4cr
COSC 300	Computer Organization and Assembly Language	3cr
COSC 310	Data Structures and Algorithms	3cr
COSC 341	Introduction to Database Management Systems	3cr
COSC 380	Seminar on the Computing Profession and Ethics	2cr
COSC 480	Seminar on Technical Topics	1cr
<b>Controlled Electives:</b> 6cr from the following: (2)		
COSC/MATH 250	Introduction to Numerical Methods	3cr
COSC 316	Host Computer Security	3cr (3)
COSC 319	Software Engineering Concepts	3cr
COSC 320	Software Engineering Practice	3cr (4)

COSC 345	Computer Networks	3cr
COSC/IFMG 354	Testing and Controlling LANs	3cr
COSC 355	Computer Graphics	3cr
COSC 356	Network Security	3cr
COSC 362	Unix Systems	3cr
COSC 365	Web Architecture and Application Development	3cr
COSC 481	Special Topics in Computer Science (only sections approved for majors)	1-4cr
COSC 482	Independent Study	1-4cr
COSC 493	Internship in Computer Science	12cr (4)
IFMG 455	Data Warehousing and Mining	3cr
<b>Upper-level Electives by Categories:</b>		6cr (5)
<i>Artificial Intelligence:</i> COSC 405		
<i>Computer Architecture:</i> COSC 410		
<i>Database Management:</i> COSC 444		
<i>Numerical Methods:</i> COSC 427, 451		
<i>Systems Programming:</i> COSC 430, 432		
<i>Theory of Languages:</i> COSC 420, 424, 460		
<b>Other Requirements:</b>		6-12
<b>Additional Writing:</b>		
ENGL 322	Technical Writing	3cr
Foreign Language Intermediate Level		
0-6cr		
<b>Additional Mathematics:</b>		
MATH 219	Discrete Mathematics	3cr
<b>Free Electives:</b>		23-29
<b>Total Degree Requirements:</b> 120		
(1) MATH 125 can be substituted by MATH 121.		
(2) Select at least 6cr from the list of controlled electives.		
(3) COSC 316 cannot be counted for major credit if a student does an Information Assurance minor.		
(4) Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements. COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester. <b>Note:</b> Only 4cr of COSC 493 can be counted toward these 6cr. Additional COSC 493 credits may be counted as free electives.		
(5) Select at least two additional courses, from at least two different categories, from the list of upper-level electives.		

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### Bachelor of Science—Computer Science/Applied Computer Science Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: 48		
<b>Mathematics:</b> MATH 125 (1)		
<b>Liberal Studies Electives:</b> 3cr, MATH 216, no courses with COSC prefix		
<b>Major:</b> 40		
<b>Required Courses:</b>		
COSC 105	Fundamentals of Computer Science	3cr
COSC 110	Problem Solving and Structured Programming	3cr
COSC 210	Object-Oriented and GUI Programming	3cr
COSC 220	Applied Computer Programming	4cr
COSC 300	Computer Organization and Assembly Language	3cr
COSC 310	Data Structures and Algorithms	3cr
COSC 319	Software Engineering Concepts	3cr
COSC 341	Introduction to Database Management Systems	3cr
COSC 365	Web Architecture and Application Development	3cr
COSC 380	Seminar on the Computing Profession and Ethics	2cr
COSC 480	Seminar on Technical Topics	1cr
One of the following two courses:		
COSC 320	Software Engineering Practice	3cr (2)
COSC 493	Internship in Computer Science	12cr (3)

<b>Controlled Electives:</b> 3cr from the following: (4)		
COSC/MATH 250	Introduction to Numerical Methods	3cr
COSC 316	Host Computer Security	3cr (5)
COSC 345	Computer Networks	3cr
COSC/IFMG 354	Testing and Controlling LANs	3cr
COSC 355	Computer Graphics	3cr
COSC 356	Network Security	3cr
COSC 362	Unix Systems	3cr
COSC 481	Special Topics in Computer Science (only sections approved for majors)	1-4cr
COSC 482	Independent Study	1-4cr
IFMG 455	Data Warehousing and Mining	3cr
<b>Upper-level Electives by Categories:</b> 3cr from the following: 3cr (6)		
<i>Artificial Intelligence:</i> COSC 405		
<i>Computer Architecture:</i> COSC 410		
<i>Database Management:</i> COSC 444		
<i>Numerical Methods:</i> COSC 427, 451		
<i>Systems Programming:</i> COSC 430, 432		
<i>Theory of Languages:</i> COSC 420, 424, 460		
<b>Other Requirements:</b>		6-12
<b>Additional Writing:</b>		
ENGL 322	Technical Writing	3cr
Foreign Language Intermediate Level		
0-6cr		
<b>Additional Mathematics:</b>		
MATH 219	Discrete Mathematics	3cr
<b>Minor:</b> Complete a minor from one of the following areas:		8-18
Information Assurance 18cr		
Any department in the College of Natural Sciences and Mathematics 8-18cr		
Designated Business courses 18cr		
Designated Economics courses 15cr		
Designated Geography courses 15cr		
Designated Communications Media courses 18cr		
<b>Free Electives:</b>		2-18
<b>Total Degree Requirements:</b> 120		
(1) MATH 125 can be substituted by MATH 121.		
(2) Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements.		
(3) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester. <b>Note:</b> Only 4cr of COSC 493 can be counted towards major. Additional COSC 493 credits may be counted as free electives.		
(4) Select at least 3cr from the list of controlled electives and/or the list of upper-level electives.		
(5) COSC 316 cannot be counted for major credit if a student does an Information Assurance minor.		
(6) Select at least one additional course from list of upper-level electives.		

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### Bachelor of Science—Computer Science/Languages and Systems Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: 48		
<b>Mathematics:</b> MATH 125 (1, 2)		
<b>Natural Science:</b> Must choose Liberal Studies Natural Science Option I		
<b>Liberal Studies Electives:</b> 3cr, MATH 126, no courses with COSC prefix (1, 2)		
<b>Major:</b> 45		
<b>Core Courses:</b>		
COSC 105	Fundamentals of Computer Science	3cr
COSC 110	Problem Solving and Structured Programming	3cr
COSC 210	Object-Oriented and GUI Programming	3cr
COSC 300	Computer Organization and Assembly Language	3cr
COSC 310	Data Structures and Algorithms	3cr

COSC 319	Software Engineering Concepts	3cr	
COSC 341	Introduction to Database Management Systems	3cr	
COSC 380	Seminar on the Computing Profession and Ethics	2cr	
COSC 480	Seminar on Technical Topics	1cr	
<b>Required Courses:</b>			
COSC 345	Computer Networks	3cr	
COSC 432	Introduction to Operating Systems	3cr	
COSC 460	Theory of Computation	3cr	
<b>Controlled Electives:</b> 12cr from the following: (2)			
COSC/MATH 250	Introduction to Numerical Methods	3cr (3)	
COSC 316	Host Computer Security	3cr	
COSC 320	Software Engineering Practice <i>or</i>	3cr	
COSC 493	Internship in Computer Science	12cr (4)	
COSC 355	Computer Graphics	3cr	
COSC 362	Unix Systems	3cr	
COSC 365	Web Architecture and Application Development <i>or</i>		
COSC 444	Productivity Tools and Fourth Generation Languages	3cr	
COSC 405	Artificial Intelligence	3cr	
COSC 410	Computer Architecture	3cr	
COSC 420	Modern Programming Languages <i>or</i>		
COSC 424	Compiler Construction	3cr	
COSC 481	Special Topics in Computer Science (as approved for majors)	1-4cr	
<b>Other Requirements:</b> 19			
ENGL 322	Technical Writing I	3cr	
One science with lab in addition to the Liberal Studies requirement 4cr			
<b>Mathematics:</b> A minor in mathematics including the following: 12cr			
MATH 171	Introduction to Linear Algebra		
MATH 216	Probability and Statistics for Natural Sciences		
MATH 219	Discrete Mathematics		
MATH 225	Calculus III for Physics, Chemistry and Mathematics <i>or</i>		
MATH 250	Introduction to Numerical Methods (3)		
<b>Free Electives:</b> 8			
<b>Total Degree Requirements:</b> 120			
(1) MATH 125 and 126 can be substituted by MATH 121 and 122.			
(2) MATH 125 and 126 (taken as Liberal Studies requirements) are also counted towards the minor.			
(3) COSC/MATH 250 may be counted as a Computer Science elective or as a part of the Mathematics minor, but not both.			
(4) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 should be taken in the immediately preceding semester. <b>Note:</b> Only 4cr can be counted towards major. Additional COSC 493 credits may be counted as free electives.			

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### Bachelor of Science–Computer Science/Information Assurance Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: 48			
<b>Mathematics:</b> MATH 125 (1)			
<b>Social Science:</b> CRIM 101 (2)			
<b>Liberal Studies Electives:</b> 3cr, MATH 216, no courses with COSC prefix			
<b>Major:</b>			
<b>Required Courses:</b> 43			
COSC 105	Fundamentals of Computer Science	3cr	
COSC 110	Problem Solving and Structured Programming	3cr	
COSC 210	Object-Oriented and GUI Programming	3cr	
COSC 220	Applied Computer Programming	4cr	
COSC 300	Computer Organization and Assembly Language	3cr	

COSC 310	Data Structures and Algorithms	3cr	
COSC 319	Software Engineering Concepts	3cr	
COSC 341	Introduction to Database Management Systems	3cr	
COSC 380	Seminar on the Computing Profession and Ethics	2cr	
COSC 480	Seminar on Technical Topics	1cr	
<b>Information Assurance Required Courses:</b>			
COSC 316	Host Computer Security	3cr	
COSC 356	Network Security	3cr	
One of the following two courses:			
COSC 320	Software Engineering Practice	3cr	
COSC 493	Internship (Information Assurance)	12cr (3)	
<b>Controlled Electives:</b> 3cr from the following:			
COSC 345	Computer Networks	3cr	
COSC/IFMG 354	Testing and Controlling LANs	3cr	
COSC 362	Unix Systems	3cr	
COSC 365	Web Architecture and Application Development	3cr	
COSC 481	Special Topics in Computer Science (as approved for majors in this track)	3cr	
IFMG 382	Auditing for EDP Systems	3cr	
<b>Upper-Level Electives:</b> 3cr from the following:			
COSC 427	Introduction to Cryptography	3cr	
COSC 432	Introduction to Operating Systems	3cr	
COSC 482	Independent Study	3cr	
COSC 400-level course	with department approval	3cr	
<b>Minor in Criminology</b> 15 (2)			
<b>Other Requirements:</b> 6-12			
<b>Additional Writing:</b>			
ENGL 322	Technical Writing I	3cr	
Foreign Language Intermediate Level 0-6cr			
<b>Additional Mathematics:</b>			
MATH 219	Discrete Mathematics	3cr	
<b>Free Electives:</b> 2-8			
<b>Total Degree Requirements:</b> 120			
(1) MATH 125 can be substituted by MATH 121.			
(2) CRIM 101 (taken as part of the social science requirement) is counted as part of the 18cr Criminology minor; 15 additional cr of CRIM are required.			
(3) COSC 493 may be selected in either the second semester of the junior year or the first semester of the senior year. If COSC 493 is selected and approved, COSC 380 may be taken in the immediately preceding semester. <b>Note:</b> Only 4cr of COSC 493 may be counted towards the major. Additional COSC 493 credits may be counted as free electives.			

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### Minor–Computer Science 18

<b>Required Courses:</b>			
At least one course from the following:			
COSC 210	Object-Oriented and GUI Programming	3cr	
COSC 220	Applied Computer Programming	4cr	
COSC 300	Computer Organization and Assembly Language	3cr	
COSC electives (1, 2, 3)		15cr	
(1) At least 6cr of the elective 15cr must be COSC courses numbered higher than 200.			
(2) COSC 101 is an appropriate entry course for minor. However, COSC 101 cannot be counted as part of a Computer Science minor by Management Information Systems majors.			
(3) See Computer Science minor advisor for suggestions.			

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### Minor–Information Assurance (1) 18

<b>Required Courses:</b>			
COSC 110	Problem Solving and Structured Programming	3cr (3)	
COSC 316	Host Computer Security	3cr	
COSC 352	LAN Design and Installation	3cr	

- |          |   |     |
|----------|---|-----|
| CRIM 101 | Crime and Justice Systems (2) <i>or</i> | 3cr |
| CRIM 102 | Survey of Criminology (2)               |     |
| CRIM 321 | Cybersecurity and Loss Prevention       | 3cr |
| CRIM 323 | Cybersecurity and the Law               | 3cr |
- (1) Computer Science/Information Assurance Track majors are not eligible to take this minor; instead, they must take a Criminology minor.
  - (2) Criminology majors cannot count CRIM 101 or 102; instead, they must take one additional course from the following: COSC 341, 356, 362, 427, 432, 482, IFMG 382.
  - (3) Computer Science majors cannot count COSC 110; instead, they must take one additional course from the following: CRIM 300, 355, 400, 401, 481, 482.

finite reserves of fossil fuels. Western Pennsylvania is a historic coal and natural gas producing region with the potential for significant growth in the natural gas industry due to development of the Marcellus Shale. The Energy Resources Track will prepare students for direct entry into the energy industry with a focus on the discovery and development of energy resources and geophysical exploration techniques.

The **B.S.Ed.–Earth and Space Science** prepares students to become certified middle and high school teachers in Pennsylvania and other states. Earth and Space Science teachers in grades 7 to 12 teach subjects that require a broad and solid foundation in science. Coursework includes study of geology, meteorology, oceanography, and astronomy. A basic understanding of the cognate sciences, biology, chemistry, and physics, and mathematics is also an essential part of the major. Courses in the foundations of education and pedagogy complement the subject matter studies. Students create and present lessons, first in their courses and then in school classrooms, culminating in the student teaching experience in the final semester.

The **Minor in Geology** is designed for students who want a background in Geology in conjunction with their main area of study. This minor may be particularly appropriate for students pursuing degrees in business or one of the social or physical sciences.

## Department of Geoscience

**Website:** [www.iup.edu/geoscience](http://www.iup.edu/geoscience)

**Steven A. Hovan, Chairperson;** Cercone, Coles, Farnsworth, Gerber, Lewis, Poage, Taylor; and professors emeriti Clark, Hall, Park, Richardson, Sutton

Geology is the broad science that encompasses all aspects of the Earth system. In addition to the solid Earth, this system includes the oceans and atmosphere, climate change, and most aspects of our immediate environment. Professional geologists are thus engaged in a wide range of activities, depending on their interests. Scientific questions addressed by geologists include: the evolution of life; the origin of volcanic activity; the assessment of volcanic and earthquake hazards; the evolution of our planetary neighbors; climate change; mineral and energy resources; and the human impact on our environment.

The department offers a B.S. degree with a major in Geology that is divided into three tracks: Geology, Environmental, and Energy Resources. All tracks give students the necessary foundation to pursue a wide variety of career goals. In addition, we offer a B.S. degree with a major in Earth and Space Science Education for those students who are interested in teaching. The degrees and courses in our program emphasize hands-on learning, including outdoor instruction, student-oriented research, and professional experiential learning opportunities. In addition to on-campus instruction and class-related field trips, the department also offers several regional geology Field Workshops, which take place in Newfoundland, the northern Rockies region, Florida and the Bahamas, and the American southwest.

The **B.S.–Geology/Geology Track** is designed for students who are interested in pursuing many of the various subdisciplines in Geology, including Oceanography/Marine Geology, Climate Change, Volcanology, Paleontology, and Geophysics. There is also considerable overlap between geology and astronomy, as geologists study the evolution of other planetary bodies, such as the Moon, Mars and Venus; the department's curriculum reflects this link and provides the groundwork for planetary studies. The Geology Track thus provides students with the foundation needed to pursue a wide variety of careers, including research and graduate studies, or working as professional geologists for energy resource companies, environmental consulting firms, or federal and state regulatory agencies.

The **B.S.–Geology/Environmental Track** is designed for students who wish to pursue careers in the environmental field. In addition to air and water quality issues, pollution often impacts the subsurface in ways that are difficult to detect and remediate. Geologists therefore play a key role in dealing with complex environmental issues; the Environmental Track prepares students to solve a variety of environmental problems. Graduates from this track will be prepared for direct entry into jobs with federal or state agencies and private environmental consulting firms, as well as graduate studies.

The **B.S.–Geology/Energy Resources Track** is designed for students who wish to pursue careers in the energy sector. As the world's energy demands continue to grow, nations face the challenge of maintaining reliable energy supplies. Conventional oil, coal, and natural gas continue as mainstays of the energy industry, but renewable and/or carbon-neutral energy sources are gaining attention in response to growing concerns about climate change and

## Bachelor of Science–Geology/Geology Track

**Liberal Studies:** As outlined in Liberal Studies section 50 with the following specifications:

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112 or 113-114

**Liberal Studies Electives:** 4cr, MATH 122, no courses with GEOS prefix

**Major:** 59

### Geoscience Core:

GEOS 201 Foundations of Geology 4cr

GEOS 202 Quantitative Methods in the Geosciences 2cr

GEOS 203 Surficial Processes 4cr

GEOS 301 Mineralogy and Petrology 4cr

GEOS 302 Structural Geology 4cr

One course from the following: (1)

GEOS 303, 401-402, 403-404, 405-406, 407-408 4cr

GEOS 470 Research Methods in the Geosciences 2cr

GEOS 480 Geoscience Seminar 2cr

PHYS 111 Physics I Lecture 3cr

PHYS 121 Physics I Lab 1cr

PHYS 112 Physics II Lecture 3cr

PHYS 122 Physics II Lab 1cr

**Controlled Electives:** Select 25cr from the following: 25cr (2)

One 100- or 200-level GEOS course

Any 300-level GEOS course

Any 400-level GEOS course

Foreign Language Intermediate Level

BIOL 111, 112

CHEM 231, 232, 322, 323, 341

GEOG 415, 419

MATH 216 or 217, 241

PHYS 342

COSC 110, 210, 250, 310, 362

**Free Electives:** 11

**Total Degree Requirements:** 120

- (1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.
- (2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Up to 12cr from non-GEOS courses may be applied toward controlled electives. 6cr of foreign language may be applied toward controlled electives provided Intermediate Level is successfully attained.

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**Bachelor of Science—Geology/Environmental Track**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50  
**Mathematics:** MATH 121  
**Natural Science:** CHEM 111-112 or CHEM 113-114  
**Liberal Studies Electives:** 4cr, MATH 122, no courses with GEOS prefix

**Major:****Required Courses:**

BIOL 111	Principles of Biology I	4cr
GEOS 201	Foundations of Geology	4cr
GEOS 202	Quantitative Methods in the Geosciences	2cr
GEOS 203	Surficial Processes	4cr
GEOS 310	Environmental Geology <i>or</i>	4cr
GEOS 311	Geochemistry	
GEOS 312	Hydrogeology	3cr
One course from the following: (1)		
GEOS 303, 401-402, 403-404, 405-406, 407-408		4cr
GEOS 470	Research Methods in the Geosciences	2cr
GEOS 480	Geoscience Seminar	2cr
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
<b>Controlled Electives:</b> Select 26cr from the following:		26cr (2)

One 100- or 200-level GEOS course  
Any 300-level GEOS course  
Any 400-level GEOS course  
Foreign Language Intermediate Level  
BIOL 112, 250  
CHEM 231, 232, 322, 323, 341  
GEOG 415, 419  
MATH 216 or 217, 241  
PHYS 112-122, 342  
COSC 110, 210, 250, 310, 362

**Free Electives:** 11

**Total Degree Requirements:** 120

- (1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.
  - (2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Up to 12cr from non-GEOS courses may be applied toward controlled electives. 6cr of foreign language may be applied toward controlled electives provided Intermediate Level is successfully attained.
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**Bachelor of Science—Geology/Energy Resources Track**

**Liberal Studies Requirements:** 50

Liberal Studies: As outlined in Liberal Studies section with the following specifications:

**Mathematics:** MATH 121  
**Natural Science:** PHYS 111-121 and CHEM 111 (or CHEM 113)  
**Social Science:** ECON 121

**Liberal Studies Electives:** 4cr, MATH 122, no courses with GEOS prefix

**Major:****Required Courses:**

GEOS 201	Foundations of Geology	4cr
GEOS 202	Quantitative Methods in the Geosciences	2cr
GEOS 203	Surficial Processes	4cr
GEOS 323	Geophysics	4cr
GEOS 324	Geology of Oil and Gas	4cr
GEOS 352	Sedimentation and Stratigraphy	4cr
GEOS 470	Research Methods in the Geosciences	2cr
GEOS 480	Geoscience Seminar	2cr

One course from the following: GEOS 303, 401-402, 403-404, 405-406, 407-408 (1) 4cr  
PHYS 112-122 Physics I Lecture and Lab or  
CHEM 112 General Chemistry II (or CHEM 114) 4cr  
**Controlled Electives:** Select 25cr from the following: 25cr (2)  
One 100- or 200-level GEOS course  
Any 300-level or 400-level GEOS course  
Foreign Language Intermediate Level  
CHEM 112 (if not taken above), 231, 232, 322, 323, 341  
ECON 122, 331, 361  
GEOG 415, 419  
MATH 216 or 217, 241  
PHYS 112-122 (if not taken above), 342  
COSC 110, 210, 250, 310, 362

**Free Electives:** 11

**Total Degree Requirements:** 120

- (1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.
  - (2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Up to 12cr from non-GEOS courses may be applied toward controlled electives. 6cr of foreign language may be applied toward controlled electives provided Intermediate Level is successfully attained.
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**Minor—Geology** 18**Required Courses:**

GEOS 201 Foundations of Geology 4cr  
GEOS 202 Quantitative Methods in the Geosciences 2cr  
12cr from the following: 12cr  
GEOS 203 Surficial Geology  
Any 300-level GEOS course  
Any 400-level GEOS course, except GEOS 470 and 480 (1)

- (1) Only one Geoscience Field Workshop (including prerequisite Seminar) can be counted toward the minor.
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**Bachelor of Science in Education—Earth and Space Science (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 52

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Liberal Studies Electives:** 6cr, MATH 217, PHYS 111, no courses with GEOS prefix

**College:** 31

**Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology 3cr  
EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr  
EDEX 323 Instruction of English Language Learners with Special Needs 2cr  
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr  
EDUC 242 Pre-Student Teaching Clinical Experience I 1cr  
EDUC 342 Pre-Student Teaching Clinical Experience II 1cr  
EDUC 441 Student Teaching 12cr  
EDUC 442 School Law 1cr  
EDUC 451 Teaching Science in the Secondary School 3cr

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**Major:****Required Courses:**

BIOL 111	Principles of Biology I	4cr
GEOS 201	Foundations of Geology	4cr
GEOS 202	Quantitative Methods in the Geosciences	2cr
GEOS 341	Planetary Geology	4cr
GEOS 342	Stellar Astronomy	4cr
GEOS 353	Paleontology	4cr
GEOS 370	Oceanography	4cr
GEOS 371	Meteorology	3cr
PHYS 121	Physics I Lab	1cr

**Controlled Electives:**

Select 9cr from the following:	9cr	
GEOS 203	Surficial Geology	
Any 300-level GEOS course		
Any 400-level GEOS course, except GEOS 470 and 480		
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

**Total Degree Requirements:** 120

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

## Department of Mathematics

**Website:** [www.iup.edu/math](http://www.iup.edu/math)

**Francisco E. Alarcón, Chairperson;** Adkins, Baker, Burch, Burkett, Chrispell, Colen, Dahma, Donley, Feldman, Flowers, Kuo, Lattanzio, Maier, Metz, Navaratna, Nosedal-Sanchez, Pararai, Radelet, Reilly, Sharp, Steelman, Stempien, Stocker, Stoudt, Walker, Wisloski, Zhang; and professors emeriti Angelo, Arms, Broughton, Buriok, Davis, Gibson, Hartman, Massey, D. McBride, R. McBride, Mitchell, Mueller, Oakes, J. Reber, Rettig, Shawer, W. Smith, Stilwell, Willison, Woodard

The Department of Mathematics prepares students for work in industry, graduate school mathematics, and teaching. Degrees offered by the department are the Bachelor of Science degree with a major in Mathematics and the Bachelor of Science in Education degree with a major in Mathematics Education. The first degree program is offered within the College of Natural Sciences and Mathematics and the second is in conjunction with the College of Education and Educational Technology. The department also offers a minor in Mathematics and a minor in Applied Statistics.

The program for a mathematics major in the College of Natural Sciences and Mathematics is two phased. A student may pursue a degree in Mathematics or a degree in Mathematics with a concentration in Applied Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school, though some may enter business, industry, or government service. Students receiving a Mathematics degree with a concentration in Applied Mathematics will be primarily prepared to enter business, industry, or government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

Students interested in the Bachelor of Science in Education–Middle-Level Education 4-8/Mathematics Specialization should refer to the College of Education and Educational Technology, Department of Professional Studies in Education section of the catalog.

**Mathematics Education**

The program leading to the B.S.Ed. with a major in Mathematics Education prepares the student for teaching mathematics in Grades 7-12. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

**NOTE: The program requirements for the Mathematics Education program were mistakenly omitted from this year's catalog. To view these requirements, please see page 273 of this PDF.**

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**Minor in Mathematics**

The minor consists of a minimum of 17 credits in mathematics. The minor in Mathematics may offer preparation for advanced study in areas such as Economics, Computer Science, Physics, and other natural sciences. Any student who is required to take a year of calculus should consider this minor.

**Minor in Applied Statistics**

The minor in Applied Statistics, consisting of 16 credits, may be of interest to students who are required to take a calculus course and a course in probability and statistics. This includes, but is not limited to, students with majors in business, Safety Sciences, or Computer Science.

A cumulative GPA of at least 2.0 in MATH courses is required for a minor in Mathematics or Applied Statistics. The department will not certify a minor for a transfer student unless at least two of the courses counting for the minor have been completed in the Mathematics Department.

**Bachelor of Science–Mathematics**

**Liberal Studies:** As outlined in Liberal Studies section 53 with the following specifications:

**Mathematics:** MATH 125**Liberal Studies Electives:** 9cr, no courses with MATH prefix**Major:** 39-40**Required Courses:**

MATH 126	Calculus II for Physics, Chemistry, Mathematics	3cr
MATH 171	Introduction to Linear Algebra	3cr
MATH 216	Probability and Statistics for Natural Sciences	3cr
MATH 225	Calculus III for Physics, Chemistry, Mathematics	3cr
MATH 241	Differential Equations	3cr
MATH 271	Introduction to Mathematical Proofs I	3cr
MATH 272	Introduction to Mathematical Proofs II	3cr
MATH 480	Senior Seminar	3cr

**Controlled Electives:**

Four courses from the following:	12cr
MATH 371, 421, 422, 423, 427, 476, 477	
A minimum of 3 additional cr from the list above or the following: MATH 342, 350, 353, 355, 363, 364, 445, 446, 447, 465, 481	3-4cr

**Other Requirements:** 3**Computer Science:**

COSC 110	Problem Solving and Structured Programming	3cr
Foreign Language Intermediate Level (1)		

**Free Electives:** 24-25**Total Degree Requirements:** 120

(1) Intermediate-level Foreign Language may be included in Liberal Studies electives.

## Bachelor of Science–Mathematics/Applied Mathematics Track

**Liberal Studies:** As outlined in Liberal Studies section 53 with the following specifications:

**Mathematics:** MATH 125**Liberal Studies Electives:** 9cr, no courses with MATH prefix (Foreign Language is included)**Major:** 42**Required Courses:**

MATH 126	Calculus II for Physics, Chemistry, Mathematics	3cr
MATH 171	Introduction to Linear Algebra	3cr
MATH 216	Probability and Statistics for Natural Sciences	3cr
MATH 225	Calculus III for Physics, Chemistry, Mathematics	3cr
MATH 241	Differential Equations	3cr



MATH 271	Introduction to Mathematical Proofs I	3cr
MATH 272	Introduction to Mathematical Proofs II	3cr
MATH 363	Mathematical Statistics I	3cr
MATH 447	Modeling and Simulation	3cr
MATH 450	Topics in Applied Computational Mathematics	3cr

**Controlled Electives:**

One course from the following:	3cr
MATH 371, 421, 423, 427, 476	
One course from the following: MATH 445 or 446	3cr
One course from the following: MATH 480 or 493 (2)	3cr
One course from the following: MATH 342, 364, 445, 446	3cr

**Other Requirements:** 21

**Computer Science:**

COSC 110	Problem Solving and Structured Programming	3cr
COSC/MATH 250	Introduction to Numerical Methods	3cr
Foreign Language Intermediate Level (3)		
Minor or Planned Program in Complementary Field	15cr	
(requires advisor approval) with at least 6cr in 300/400-level courses		

**Free Electives:** 4

**Total Degree Requirements:** 120

- (1) A student may select courses for a specialized area.  
*Statistics/ Actuarial Science:* MATH 363, 364, 371, 446  
 Additionally, a student should minor in Applied Statistics  
*Math Analysis/Engineering:* MATH 342/447, 371, 423  
*Operations Research:* MATH 371, 421, 445/446, 447
- (2) 3cr of internship will be applied to the major. Additional credits may count as free electives.
- (3) Intermediate-level Foreign Language may be included in Liberal Studies electives.

**Minor–Applied Statistics 16**

<b>Required Courses:</b>	9cr
MATH 214 or 216 or 217	
MATH 417	
MATH 418	

<b>Controlled Electives:</b>	7cr
Select at least 7cr from the following:	
MATH 115 or 121 or 125, 363, 364, CRIM 306, QBUS 215, ECON 356, PSYC 291, or any statistics or quantitative methods course approved by the Applied Statistics Advisor	

**Minor–Mathematics 17**

<b>Required Courses:</b>	6-8cr
MATH 121 or 125 and MATH 122 or 126	
<b>Controlled Electives:</b>	9-11cr (1)
Other courses for math majors, MATH 219 and 250 may be included	

- (1) The following courses are excluded: MATH 100, 101, 105, 110, 115, 214, 217, 417, 418, and courses for the Middle-Level Education 4-8/ Mathematics Specialization.

**Natural Science**

**Website:** [www.iup.edu/preprofessional](http://www.iup.edu/preprofessional)  
**Lawrence Kupchella, Coordinator**

The program leading to the B.S. degree with a major in Natural Science is designed to prepare students for admission to professional schools—chiropractic, dentistry, optometry, physical therapy, pharmacy, and podiatry. A separate track prepares students for further study in engineering. The B.S. degree with a major in Natural Science will be earned by students who transfer to professional schools which have an articulation agreement with IUP.

In some cases, students interested in obtaining a four-year baccalaureate degree before entering a medical or professional school should enroll in a program leading to a B.A. or B.S. degree in the departments of Biology or Chemistry. Students considering a professional career in a high-technology business or health-oriented businesses or industries may wish to obtain a foundation in the Natural Sciences while using their free electives to pursue additional work in areas such as Molecular Biology, Biochemistry, Psychology, Economics, Pre-Law, or Athletic Training. The B.S. degree with a major in Natural Science may not be used for a second major or a second degree by majors in the College of Natural Sciences and Mathematics. For further information, contact the Natural Science Program coordinator.

**Bachelor of Science–Natural Science**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement

**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement

**Liberal Studies Electives:** BTED/COSC/IFMG 101; no courses with SCI prefix

**Major:** 41

**Required Courses:**

<b>Biology:</b>		
BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr
BIOL 263	Genetics	3cr

**Chemistry:**

CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
CHEM 351	Biochemistry	4cr

**Physics:**

PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

**Mathematics:**

MATH 216	Probability and Statistics for Natural Sciences	3cr
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**Other Requirements:** 0-6

Foreign Language Intermediate Level 0-6cr

**Free Electives:** 24-30

**Total Degree Requirements:** 120

**Bachelor of Science–Natural Science/Pre-Chiropractic Track (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Mathematics:** 4cr, MATH 121

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement

**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement

**Liberal Studies Electives:** COSC 101, no courses with SCI prefix

<b>Major:</b>	41	<b>Other Requirements:</b>	0-6
<b>Required Courses:</b>		Foreign Language Intermediate Level	
BIOL 111 Principles of Biology I	4cr	<b>Free Electives: (1)</b>	0-30
BIOL 112 Principles of Biology II	4cr	Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated dental school after three years at IUP	
BIOL 150 Human Anatomy	3cr	Maximum cr for work at affiliated dental school	30cr
BIOL 151 Human Physiology	4cr	<b>Total Degree Requirements:</b>	120
BIOL 241 General Microbiology	3cr	(*) Accelerated three-year Temple University School of Dentistry program. A maximum of 30cr of work may be transferred after the first year at Temple University School of Dentistry. Upon completion of the first year of studies at Temple University School of Dentistry, a transcript from Temple University is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.	
BIOL 263 Genetics	3cr	(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Ceramics and additional courses in Biology are highly recommended.	
CHEM 231 Organic Chemistry I	4cr		
CHEM 232 Organic Chemistry II <i>or</i>			
CHEM 351 Biochemistry	4cr		
PHYS 111 Physics I Lecture	3cr		
PHYS 121 Physics I Lab	1cr		
PHYS 112 Physics II Lecture	3cr		
PHYS 122 Physics II Lab	1cr		
MATH 216 Probability and Statistics for Natural Sciences	3cr		
<b>Other Requirements:</b>	0-6		
Foreign Language Intermediate Level			
<b>Free Electives: (1)</b>	0-30		
Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated chiropractic colleges after three years at IUP			
Maximum cr for work at affiliated chiropractic school	30cr		
<b>Total Degree Requirements:</b>	120		
(*) Accelerated three-year New York Chiropractic College, Logan Chiropractic College, Sherman Chiropractic College, and Parker Chiropractic programs. A maximum of 30cr of work may be transferred after the first year at one of the chiropractic school programs. Upon completion of the first year of studies at one of the chiropractic school programs, a transcript from that school is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.			
(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Additional courses in Biology and HPED 315 or 345 are recommended.			

### Bachelor of Science–Natural Science/Pre-Dentistry Track (\*)

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications:	49
<b>Mathematics:</b> MATH 121	
<b>Natural Science:</b> CHEM 111-112	
<b>Social Science:</b> PSYC 101	
<b>Synthesis:</b> not required for three-year students who transfer to a professional school with an articulation agreement	
<b>Writing Intensive:</b> writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement	
<b>Liberal Studies Electives:</b> COSC 101, no courses with SCI prefix	
<b>Major:</b>	41
<b>Required Courses:</b>	
BIOL 111 Principles of Biology I	4cr
BIOL 112 Principles of Biology II	4cr
BIOL 150 Human Anatomy	3cr
BIOL 151 Human Physiology	4cr
BIOL 241 General Microbiology	3cr
BIOL 263 Genetics	3cr
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II <i>or</i>	
CHEM 351 Biochemistry	4cr
PHYS 111 Physics I Lecture	3cr
PHYS 121 Physics I Lab	1cr
PHYS 112 Physics II Lecture	3cr
PHYS 122 Physics II Lab	1cr
MATH 216 Probability and Statistics for Natural Sciences	3cr

### Bachelor of Science–Natural Science/Pre-Engineering Track

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications:	53
<b>Mathematics:</b> MATH 123	
<b>Humanities/Philosophy and Religious Studies:</b> PHIL 222	
<b>Natural Science:</b> CHEM 111-112	
<b>Social Science:</b> ECON 121, PLSC 101 or 111	
<b>Synthesis:</b> not required for three-year students	
<b>Writing Intensive:</b> one course required for three-year students	
<b>Liberal Studies Electives:</b> MATH 124, no courses with SCI prefix	
<b>Major:</b>	33-35
<b>Required Courses:</b>	
COSC 110 Problem Solving and Structured Programming	3cr
COSC 250 Introduction to Numerical Methods	3cr
MATH 171 Introduction to Linear Algebra	3cr
MATH 241 Differential Equations	3cr
MATH 342 Advanced Mathematics for Applications	4cr
PHYS 131 Physics I-C Lecture	3cr
PHYS 132 Physics II-C Lecture	3cr
PHYS 141 Physics I-C Lab (or PHYS 121 Lab)	1cr
PHYS 142 Physics II-C Lab	1cr
PHYS 331 Modern Physics (2)	3cr
<b>Controlled Electives:</b> one package, depending on program	
<i>Chemical Engineering:</i>	
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II	4cr
<i>Civil Engineering:</i>	
MATH 216 Probability and Statistics for Natural Sciences	3cr
— Technical elective	3-4cr
<i>Electrical Engineering:</i>	
MATH 216 Probability and Statistics for Natural Sciences	3cr
— Technical elective	3-4cr
<i>Industrial Engineering:</i>	
MATH 216 Probability and Statistics for Natural Sciences	3cr
— Technical elective	3-4cr
<i>Materials Science and Engineering:</i>	
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II	4cr
<i>Mechanical Engineering:</i>	
— Technical electives	6-8cr
<b>Other Requirements:</b>	0-6
Foreign Language Intermediate Level (1)	
<b>Free Electives:</b>	9

**Other Requirements:** about 64  
Two years at University of Pittsburgh School of Engineering (2, 3)

**(#) Total Degree Requirements:** 159-161

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) A 2.8 cumulative GPA is required for transfer to the University of Pittsburgh.
- (3) For curriculum information about the cooperative program in engineering with Drexel University, refer to the catalog section for the Physics Department.

**(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.**

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**Bachelor of Science–Natural Science/Pre-Optometry Track (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49  
**Mathematics:** MATH 121  
**Natural Science:** CHEM 111-112  
**Social Science:** ECON 101, PSYC 101  
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement  
**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement  
**Liberal Studies Electives:** COSC 101, no courses with SCI prefix

**Major:** 41

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr
BIOL 263	Genetics	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
	CHEM 351 Biochemistry	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr
MATH 216	Probability and Statistics for Natural Sciences	3cr

**Other Requirements:** 0-6  
Foreign Language Intermediate Level

**Free Electives:** (1) 0-30  
Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated optometry school after three years at IUP  
Maximum cr for work at affiliated optometry school 30cr

**Total Degree Requirements:** 120

(\*) Accelerated three-year Pennsylvania College of Optometry (PCO) program. A maximum of 30cr of work may be transferred after the first year at PCO. Upon completion of the first year of studies at PCO, a transcript from PCO is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation.

(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Neurobiology and Optics are highly recommended courses.

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**Bachelor of Science–Natural Science/Pre-Pharmacy Track (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49  
**Mathematics:** MATH 121  
**Natural Science:** CHEM 111-112  
**Social Science:** ECON 101, PSYC 101  
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement  
**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement  
**Liberal Studies Electives:** COSC 101, no courses with SCI prefix

**Major:** 41

**Required Courses:**

BIOL 111	Principles of Biology I	4cr
BIOL 112	Principles of Biology II	4cr
BIOL 150	Human Anatomy	3cr
BIOL 151	Human Physiology	4cr
BIOL 241	General Microbiology	3cr
BIOL 263	Genetics	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
	CHEM 351 Biochemistry	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr
MATH 216	Probability and Statistics for Natural Sciences	3cr

**Other Requirements:** 0-6  
Foreign Language Intermediate Level

**Free Electives:** (1) 0-30  
Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated pharmacy school after three years at IUP  
Maximum cr for work at affiliated pharmacy school 30cr

**Total Degree Requirements:** 120

(\*) Accelerated three-year Shenandoah University School of Pharmacy (SUSP) or Lake Erie College of Osteopathic Medicine School of Pharmacy (LECOMP) program. A maximum of 30cr may be transferred after first year at SUSP or LECOMP. Upon completion of the first year of studies at either SUSP or LECOMP, a transcript from SUSP or LECOMP is to be sent by the student to the dean of the College of Natural Sciences and Mathematics at IUP with a note requesting application materials for graduation.

(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Additional courses in Chemistry and COMM 101 are recommended.

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**Bachelor of Science–Natural Science/Pre-Physical Therapy Track (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49  
**Mathematics:** MATH 121  
**Natural Science:** CHEM 111-112  
**Social Science:** PSYC 101  
**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement  
**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement  
**Liberal Studies Electives:** COSC 101, no courses with SCI prefix

<b>Major:</b>	41	<b>Other Requirements:</b>	0-6
<b>Required Courses:</b>		Foreign Language Intermediate Level	
BIOL 111 Principles of Biology I	4cr	<b>Free Electives: (1)</b>	0-30
BIOL 112 Principles of Biology II	4cr	Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated podiatry school after three years at IUP	
BIOL 150 Human Anatomy	3cr	Maximum cr for work at affiliated podiatry school	30cr
BIOL 151 Human Physiology	4cr	<b>Total Degree Requirements:</b>	120
BIOL 241 General Microbiology	3cr	(*) Accelerated three-year Temple University School of Podiatry program. A maximum of 30sh may be transferred after the first at Temple University School of Podiatry. Upon completion of the first year of studies at Temple University School of Podiatry, a transcript from Temple University is to be sent by the student to the dean of the College of Natural Sciences and Mathematics at IUP with a note requesting application materials for graduation.	
BIOL 263 Genetics	3cr	(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Additional courses in Biology are recommended.	
CHEM 231 Organic Chemistry I	4cr		
CHEM 232 Organic Chemistry II <i>or</i>			
CHEM 351 Biochemistry	4cr		
PHYS 111 Physics I Lecture	3cr		
PHYS 121 Physics I Lab	1cr		
PHYS 112 Physics II Lecture	3cr		
PHYS 122 Physics II Lab	1cr		
MATH 216 Probability and Statistics for Natural Sciences	3cr		
<b>Other Requirements:</b>	0-6		
Foreign Language Intermediate Level			
<b>Free Electives: (1)</b>	0-30		
Electives to meet minimum of 90 IUP cr and minimum of 24cr in Humanities and Social Sciences for admission to affiliated physical therapy school after three years at IUP			
Maximum cr for work at affiliated physical therapy school	30cr		
<b>Total Degree Requirements:</b>	120		
(*) Accelerated three-year Gannon University School of Physical Therapy program. A maximum of 30sh of work may be transferred after the first year at Gannon University School of Physical Therapy. Upon the completion of the first year of studies at one of the physical therapy schools, a transcript from that school is to be sent by the student to the dean of the College of Natural Sciences and Mathematics with a note requesting application materials for graduation. Articulation agreement with Chatham University School of Physical Therapy requires a B.S. from IUP.			
(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Neurobiology, Biomechanics, and Athletic Training are highly recommended.			

### Bachelor of Science–Natural Science/Pre-Podiatry Track (\*)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Synthesis:** not required for three-year students who transfer to a professional school with an articulation agreement

**Writing Intensive:** writing-intensive course only required for three-year students who transfer to a professional school with an articulation agreement

**Liberal Studies Electives:** COSC 101, no courses with SCI prefix

**Major:**

**Required Courses:**

BIOL 111 Principles of Biology I	4cr	41
BIOL 112 Principles of Biology II	4cr	
BIOL 150 Human Anatomy	3cr	
BIOL 151 Human Physiology	4cr	
BIOL 241 General Microbiology	3cr	
BIOL 263 Genetics	3cr	
CHEM 231 Organic Chemistry I	4cr	
CHEM 232 Organic Chemistry II <i>or</i>		
CHEM 351 Biochemistry	4cr	
PHYS 111 Physics I Lecture	3cr	
PHYS 121 Physics I Lab	1cr	
PHYS 112 Physics II Lecture	3cr	
PHYS 122 Physics II Lab	1cr	
MATH 216 Probability and Statistics for Natural Sciences	3cr	

### B.S.–Natural Science/Science for Disaster Response Track

This track provides intensive education and training in the principles involved in detecting, identifying, and safe handling of chemical, biological, radiological, or nuclear (CBRN) agents and their precursors as they are related to weapons of mass destruction (WMD). This track responds to the national mandate to improve the educational level of first responders in the WMD community. The intended audience is the National Guard Bureau's Weapons of Mass Destruction Civil Support Teams (WMD-CST), other United States Government WMD and homeland security response elements, state and local civilian WMD and homeland security response elements, and related emergency planners. Additionally, this track prepares WMD first responders for employment in technical positions related to Homeland Security or graduate studies in CBRN defense.

**Requirements for Admission:** In addition to meeting admission requirements at IUP, the applicant must have local, state, or federal agency/organization authorization certifying student participation in emergency response teams. The purpose of this requirement is to ensure security because of the sensitive nature of some of the course material.

The applicant also must have sufficient preparation in biology, chemistry, physics, and mathematics. Preparation should include high school biology, chemistry, physics, algebra, geometry, and trigonometry. Additionally, all students must take a placement exam that has been developed by the WMD-faculty for Levels 1, 2, and 3 of the SDR courses. This placement exam is designed to assess the student's knowledge of the material in the courses associated with Levels 1, 2, and 3. Each course has questions on the placement exam. Students must attain a score of 80 percent or higher on the questions associated with a course in order to place out of that course. However, the students will not receive credit for a course they don't have to take. Therefore, they will have to make up the credits by taking another course. The advisors will help the students to select an appropriate course.

Applicants should have prior education and training in domestic preparedness, sample collection and analysis, emergency medicine, and emergency response. Due to the sensitive nature of some of the course material and the need to ensure security, all students who are interested in applying for admission into the B.S.–Natural Science with specialization in SDR must be approved by the director of the WMD Programs at IUP prior to submitting an application. Contact information for the director of the WMD Programs at IUP is on the IUP/WMD website [www.iup.edu/wmdrealiti](http://www.iup.edu/wmdrealiti).

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## Bachelor of Science–Natural Science/Science for Disaster Response Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 49

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112 or CHEM 113-114

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, PHYS 111, no courses with SCI or SDR prefixes

**Major:** 60

### Required Courses:

#### Biology: (1)

BIOL 111 Principles of Biology I 4cr

BIOL 150 Human Anatomy 3cr

BIOL 151 Human Physiology 4cr

#### SDR Core Courses (Biology):

SDR 111 Basic Biological Laboratory Operations 5cr

SDR 211 Interaction of CBRN Materials with

Biological Systems and PCR Technology 5cr

SDR 311 Structure of DNA, RNA, and Cell Morphology 5cr

#### SDR Core Courses (Chemistry):

SDR 121 Chemical Recognition and Identification

Techniques 5cr

SDR 221 Chemistry of Precursor Compounds 5cr

SDR 321 Organic Chemistry of WMD, TICS, and TIMS 5cr

#### Physics:

PHYS 112 Physics II Lecture 3cr

PHYS 121 Physics I Lab 1cr

PHYS 122 Physics II Lab 1cr

PHYS 222 Mechanics I 2cr

PHYS 331 Modern Physics 3cr

#### SDR Core Courses (Physics):

SDR 131 Principles of Radiation 3cr

SDR 231 Hazards of Ionizing Radiation 3cr

SDR 331 Interaction of Ionizing Radiation 3cr

#### Other Requirements: 4-10

MATH 122 Calculus II for Natural and Social Sciences 4cr

Foreign Language Intermediate Level 0-6cr

#### Free Electives: 1-7

#### Suggested:

BIOL 401 Methods in Molecular Biology

and Biotechnology 3cr

BIOL 410 Advanced Topics in Molecular Biology 3cr

COSC 101 Computer Literacy 3cr

MATH 216 Probability and Statistics for Natural Sciences or 3cr

MATH 217 Probability and Statistics 3cr

SDR 486 Selected Topics in SDR 1-6cr

#### Total Degree Requirements: 120

(1) Students transferring from the SDR track must fulfill all requirements of the transferred Natural Science preprofessional track.

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## Department of Physics

**Website:** [www.iup.edu/physics](http://www.iup.edu/physics)

**Devki N. Talwar, Chairperson;** Freda, Haija, Karimi, Kenning, Numan, Sobolewski, Wijekumar, Zhou; and professors emeriti Berry, Buckwalter, Fox, Gaggini, Hershman, Matolyak, Matous, Riban, Roberts, Whitson

The goal of the Department of Physics is to prepare fully qualified individuals for productive careers in physics. Five degrees are offered within the College of Natural Sciences and Mathematics: the Bachelor of Science degree with a major in Physics, the Bachelor of Arts degree with a major in Physics\*, the Bachelor of Science degree with a major in Applied Physics, the Associate in Applied Science in Electro-Optics\*, and the Associate in Science in Electro-Optics. The first three programs offer very good preparation for graduate study in physics or for research in industrial technology.

The applied physics degree provides a strong technical background for work in solid-state electronics or electro-optics or for interdisciplinary research in the areas of computer science, chemistry, biology, and geology. A Bachelor of Science in Education with a major in Physics is also offered. A two-year pre-engineering program is offered in cooperation with Drexel University wherein students transfer to Drexel after two years. The department also offers a minor in Physics, as well as general science courses that satisfy the Natural Science requirements of the Liberal Studies program.

The two associate degrees in Electro-Optics, Associate in Applied Science in Electro-Optics\* (A.A.S.E.O.) and Associate in Science in Electro-Optics (A.S.E.O.), are designed to produce trained and skilled workers that will move into senior technician slots in the electro-optics industry, both locally and nationally. With the A.S.E.O. degree the student has a choice of either going directly to work or matriculating at the IUP main campus in the Electro-Optics track in Applied Physics. The two associate degrees, A.A.S.E.O and A.S.E.O., are offered at the IUP Northpointe Campus.

*\*In July 2010, the B.A. degree with a major in Physics and the A.A.S. in Electro-Optics degree were placed in moratorium. Programs in moratorium are closed to new admits, readmits, and continuing students requesting a Change of Major. However, continuing students previously admitted into a program that is in moratorium are given three years (from when the program is placed in moratorium) to complete the program.*

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## Nanomanufacturing Technology Track

The Bachelor of Science degree with a major in Applied Physics/Nanomanufacturing Technology Track (NMT) will help IUP students to take one semester of experiential learning in the high-tech field of semiconductor device manufacturing at the state-of-the-art facility at Penn State-University Park Campus. Nanofabrication industries using this technology are rapidly growing from biomedical applications to microelectronics. Graduates of the Applied Physics/NMT Track may enter careers in industry and education.

The students enrolled in Applied Physics/NMT Track will spend one semester (16 weeks) (18cr Capstone) in their Junior/Senior year at Penn State (in the fall, spring, or summer [12 weeks]) for hands-on experience in high-tech semiconductor device manufacturing field. Students must earn a GPA of at least 3.0 in the required Science and Mathematics courses to be considered for admission into the Capstone semester at Penn State.

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## Minor in Physics

To minor in Physics, a student must successfully complete 15 credits in Physics consisting of at least three courses at the 200 level or higher.

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## Cooperative Pre-Engineering (Chemical, Civil, Electrical, Materials, Mechanical) Program with Drexel University

Common to all pre-engineering programs are the following science and mathematics requirements: \*PHYS 131-141, PHYS 132-142, PHYS 322, PHYS 342, \*MATH 123, \*MATH 124, MATH 171, MATH 241, \*CHEM 111, \*CHEM 112 (\*or appropriate substitute).

Further requirements depend on the particular engineering program chosen. Complete information regarding a specific program may be obtained from the Physics Department. For information on the Cooperative Pre-Engineering program with the University of Pittsburgh, see the catalog section for Natural Science and the program outline for "B.S.–Natural Science/Pre-Engineering."

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## Bachelor of Science–Physics

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125

**Natural Science:** PHYS 131-141 and 132-142

**Liberal Studies Electives:** 3cr, MATH 126, no courses with PHYS prefix

**Major:** 34

### Required Courses:

PHYS 131 Physics I-C Lecture \*cr (1)

PHYS 132 Physics II-C Lecture \*cr (1)

PHYS 141	Physics I-C Lab	*cr (1)
PHYS 142	Physics II-C Lab	*cr (1)
PHYS 231	Electronics	4cr
PHYS 331	Modern Physics	3cr
PHYS 342	Thermal and Statistical Physics	3cr
PHYS 345	Optics	3cr
PHYS 350	Intermediate Experimental Physics I	3cr
PHYS 401	Theoretical Physics	3cr
PHYS 441	Classical Mechanics	3cr
PHYS 451	Electricity and Magnetism	3cr
PHYS 461	Quantum Mechanics I	3cr

**Controlled Electives:**

One course from the following: PHYS 472 or 490	3cr
One additional PHYS majors course	3cr

**Other Requirements:**

	16-22	
COSC 110	Problem Solving and Structured Programming	3cr
MATH 225	Calculus III	3cr
MATH 241	Differential Equations	3cr
MATH 342	Advanced Mathematics for Applications	4cr

One course from the following:

COSC 250, MATH 171, 363, 421, 423	3cr
Foreign Language Intermediate Level (2, 3)	0-6cr

**Free Electives:** 16-22

**Total Degree Requirements:** 120

- (1) Credits are counted in the Liberal Studies Natural Science requirement.
- (2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (3) 6cr of computer language may substitute for the foreign language requirement: COSC 110 and 210 or higher-level computer science courses (COSC 250 recommended), with department permission.

**Bachelor of Science—Applied Physics**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** MATH 123

**Natural Science:** CHEM 111-112 (replaced by CHEM 113-114 for Chemistry track)

**Liberal Studies Electives:** 4cr, MATH 124, no courses with PHYS prefix

**Major:** 28

**Required Courses:**

PHYS 131	Physics I-C Lecture	3cr
PHYS 132	Physics II-C Lecture	3cr
PHYS 141	Physics I-C Lab	1cr
PHYS 142	Physics II-C Lab	1cr
PHYS 222	Mechanics I	2cr
PHYS 231	Electronics	4cr
PHYS 322	Electricity and Magnetism I	2cr
PHYS 331	Modern Physics	3cr
PHYS 345	Optics	3cr
PHYS 352	Applied Physics Laboratory	3cr
PHYS 355	Computer Interfacing	3cr

**Controlled Electives:** According to Track 23-27

*Solid State Electronics Track:* COSC 300, MATH 342, PHYS 323, 342, 353, 432, 475, 476 24 cr

*Computer Science Track:* COSC 300, 310, 410, 450, PHYS 342, 353, 432, 475, 476 27 cr

*Chemistry Track:* CHEM 231, 232, 323, 341, 342, 343, MATH 342 24 cr

*Biology Track:* BIOL 111, 120, CHEM 231, 323, 351 27 cr  
Two biology electives from the following:  
BIOL 250, 263, 350, 401, 472

*Geology Track:* GEOS 121, 122, 131, 132 23 cr  
Five Geoscience electives from the following:  
GEOS 220, 325, 326, 362, 412, 440, 481

**Other Requirements:** 9-15

COSC 110	Problem Solving and Structured Programming	3cr
COSC 250	Introduction to Numerical Methods	3cr
MATH 241	Differential Equations	3cr
Foreign Language Intermediate Level (1, 2)		0-6cr

**Free Electives:** 0-10

**Total Degree Requirements:** 120

- (1) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (2) 6cr of computer language may substitute for the foreign language requirement: COSC 110 and 210 or higher-level computer science courses (COSC 250 recommended), with department permission.

**Bachelor of Science in Education—Physics (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 51

**Mathematics:** MATH 125

**Natural Science:** CHEM 111-112

**Social Science:** PSYC 101

**Liberal Studies Electives:** 6cr, MATH 241, GEOS 101 or 103 or 105, no courses with PHYS prefix

**College:** 31

**Preprofessional Education Sequence:**

COMM 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

**Professional Education Sequence:**

EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr
EDUC 441	Student Teaching	12cr
EDUC 442	School Law	1cr
EDUC 451	Teaching Science in the Secondary School	3cr

**Major:** 33

**Required Courses:**

PHYS 131	Physics I-C Lecture	3cr
PHYS 132	Physics II-C Lecture	3cr
PHYS 141	Physics I-C Lab	1cr
PHYS 142	Physics II-C Lab	1cr
PHYS 231	Electronics	4cr
PHYS 331	Modern Physics	3cr
PHYS 342	Thermal and Statistical Physics	3cr
PHYS 345	Optics	3cr
PHYS 350	Intermediate Experimental Physics I	3cr
PHYS 441	Classical Mechanics	3cr
PHYS 451	Electricity and Magnetism	3cr

**Controlled Elective:**

Physics elective - major course 200 level or higher 3cr

**Other Requirements: Additional Math Course:** 10

BIOL 111	Principles of Biology I	4cr
MATH 126	Calculus II for Physics, Chemistry, and Mathematics	3cr
MATH 225	Calculus III for Physics, Chemistry, and Mathematics	3cr

(#) **Total Degree Requirements:** 125

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

## Bachelor of Science—Applied Physics/Nanomanufacturing Technology Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** MATH 123

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 4cr, MATH 124, no course with PHYS prefix

**Major:** 28

### Required Courses:

PHYS 131	Physics I-C Lecture	3cr
PHYS 132	Physics II-C Lecture	3cr
PHYS 141	Physics I-C Lab	1cr
PHYS 142	Physics II-C Lab	1cr
PHYS 222	Mechanics I	2cr
PHYS 231	Electronics	4cr
PHYS 322	Electricity and Magnetism I	2cr
PHYS 331	Modern Physics	3cr
PHYS 345	Optics	3cr
PHYS 352	Applied Physics Laboratory	3cr
PHYS 355	Computer Interfacing	3cr

### Controlled Electives:

**Nanomanufacturing Technology Track** (18cr PSU Capstone) 24

NMTT 311	Materials, Safety, and Equipment Overview for Nanofabrication	3cr
NMTT 312	Basic Nanofabrication Process	3cr
NMTT 313	Thin Films in Nanofabrication	3cr
NMTT 314	Lithography and Patterning Techniques	3cr
NMTT 315	Materials Modification in Nanofabrication	3cr
NMTT 316	Characterization, Packaging, and Testing of Nanofabrication Structures	3cr
PHYS 475	Physics of Semiconductor Devices I	3cr
PHYS 476	Physics of Semiconductor Devices II	3cr

### Other Requirements:

COSC 110	Problem Solving and Structured Programming	3cr	9-15
COSC 250	Introduction to Numerical Methods	3cr	
MATH 241	Differential Equations	3cr	
Foreign Language	Intermediate Level	0-6cr	

**Free Electives:** 3-9

**Total Degree Requirements:** 120

## Bachelor of Science—Applied Physics/Electro-Optics Track

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 50

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112

**Liberal Studies Electives:** 4cr, MATH 122, no course with PHYS prefix

**Major:** 47

### Required Courses:

EOPT 105	Computer Interfacing in Electro-Optics	3cr
EOPT 110	Geometric Optics	3cr
EOPT 120	Wave Optics	3cr
EPOT 124	Electronics I	4cr
EOPT 126	Electronics II	3cr
EOPT 145	Laser Safety	1cr
PHYS 100	Prelude to Physics or	
EOPT 150	Fundamentals of Light and Lasers	
PHYS 131	Physics I-C Lecture (1)	3cr
PHYS 132	Physics II-C Lecture (1)	3cr
PHYS 331	Modern Physics	3cr
PHYS 350	Intermediate Experimental Physics I	3cr
PHYS 441	Classical Mechanics	3cr
PHYS 451	Electricity and Magnetism	3cr

Three courses from the following: 9cr

EOPT 210	Detection and Measurement
EOPT 220	Introduction to Lasers
EOPT 240	Fiber Optics
EOPT 250	High-Vacuum Technology
EOPT 260	Industrial Applications of Lasers
MGMT 234	Introduction to Quality Control

### Other Requirements:

COSC/BTED/IFMG 101 <i>or</i> COSC/BTED/COMM/IFMG 201	3cr	15-21
COSC 110	Problem Solving and Structured Programming	3cr
COSC 250	Introduction to Numerical Methods	3cr
MATH 241	Differential Equations	3cr
SAFE 101	Introduction to Occupational Safety and Health	3cr
Foreign Language	Intermediate Level (2, 3)	0-6cr

**Free Electives:** 2-8

**Total Degree Requirements:** 120

- (1) PHYS 131 and 132 waived if student took PHYS 115 and 116 or equivalent.
- (2) Intermediate-level Foreign Language may be included in Liberal Studies electives.
- (3) 6cr of computer language may substitute for the foreign language requirement: COSC 110 and 210 or higher-level computer science courses (COSC 250 recommended), with department permission.

## Associate in Science—Electro-Optics (A.S.E.O.)

**Liberal Studies:** Following are the required Liberal Studies courses: 30

**English Composition:** ENGL 101

**Fine Arts:** 3cr

**Humanities:** 3cr

**Mathematics:** MATH 121

**Natural Science:** CHEM 111

**Social Science:** 3cr

**Health/Wellness:** 3cr

**Liberal Studies Electives:** SAFE 145, COSC/BTED/IFMG 101 or COSC/BTED/COMM/IFMG 201

**Major:** 34

### Required Courses:

EOPT 105	Computer Interfacing in Electro-Optics	3cr
EOPT 110	Geometric Optics	3cr
EOPT 120	Wave Optics	3cr
EOPT 125	Introduction to Electronics	4cr
PHYS 100	Prelude to Physics	3cr
PHYS 115	Physics I for Electro-Optics	3cr
PHYS 116	Physics II for Electro-Optics	3cr
Two courses from the following:		6cr

EOPT 210	Detection and Measurement
EOPT 220	Introduction to Lasers
MGMT 234	Introduction to Quality Control

Two courses from the following:	6cr
EOPT 240	Fiber Optics
EOPT 250	High-Vacuum Technology
EOPT 260	Industrial Applications of Lasers

**Total Degree Requirements:** 64

## Department of Psychology

**Website:** [www.iup.edu/psychology](http://www.iup.edu/psychology)

**Raymond P. Pavloski, Chairperson;** Berman, Federoff, Goodwin, Hatfield, Johnson, Kaniasty, Knight, LaPorte, Long, Luo, McHugh, Meil, Mills, Palumbo, Raeff, Reardon, Robertson, Roehrich, Ruffner, Sadler, Sherburne, Zimny; and professors emeriti Grover, Magee, Marquette, Patton, Rich, Rittle, Schneider, Sussmann, Thornton, Walz

The program in psychology leads to a Bachelor of Arts degree and is designed to give the student an understanding of the methods and major find-

ings in the science of behavior and mental processes. The major offers the background required for graduate work in psychology and also preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

An honors program has been developed to enrich the education of qualified psychology majors and to assist students in gaining entrance to graduate school. The core for the program is the same as for the psychology major; special seminar classes and independent research experiences culminating in an Honors Thesis are required.

All psychology majors are required to take a minor or a concentration in another discipline.

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### Bachelor of Arts–Psychology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217

**Natural Science:** BIOL 103-104 recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, no course with PSYC prefix

**Major:** 34-39

**Required Courses:**

PSYC 290 Research Design and Analysis I 4cr

PSYC 291 Research Design and Analysis II 4cr

**Controlled Electives:** A minimum of one course from each of the following six core areas: (1)

A. *Developmental Psychology*: PSYC 310, 311, 312, 315 3-4cr (2)

B. *Individual Differences*: PSYC 320, 321, 325 3-4cr

C. *Social/Environmental*: PSYC 330, 331, 335 3-4cr (3)

D. *Cognition/Learning*: PSYC 341, 342, 345 3-4cr (4)

E. *Biological Bases of Behavior*: PSYC 350, 352, 355, 356, 359 3-4cr (5)

F. *Metatheoretical Perspectives in Psychology*: PSYC 410, 411 3cr

Other PSYC electives beyond PSYC 101 6-8cr

**Other Requirements:** 15-21

Foreign Language Intermediate Level 0-6cr (6)

Minor/concentration 15cr

**Free Electives:** 12-23

**Total Degree Requirements:** 120

- (1) At least two must be content-based laboratory courses.
- (2) Credit toward the major will be given for only one of PSYC 310, 311, or 315.
- (3) Credit toward the major will be given for only one of PSYC 330 or 335.
- (4) Credit toward the major will be given for only one of PSYC 342 or 345.
- (5) Credit toward the major will be given for only one of PSYC 350 or 356.
- (6) Intermediate-level Foreign Language may be included in Liberal Studies electives.

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### Bachelor of Arts–Psychology/Honors Program in Psychology

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 217

**Natural Science:** BIOL 103-104 recommended

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, no course with PSYC prefix

**Major:** 40-43

**Required Courses:**

PSYC 290 Research Design and Analysis I 4cr

PSYC 291 Research Design and Analysis II 4cr

PSYC 480 Honors Seminar in Psychology 6cr (1)

PSYC 483 Honors Thesis 6cr (2)

**Controlled Electives:** A minimum of one course from each of the following six core areas: (3)

A. *Developmental Psychology*: PSYC 310, 311, 312, 315 3-4cr (4)

B. *Individual Differences*: PSYC 320, 321, 325 3-4cr

C. *Social/Environmental*: PSYC 330, 331, 335 3-4cr (5)

D. *Cognition/Learning*: PSYC 341, 342, 345 3-4cr (6)

E. *Biological Bases of Behavior*: PSYC 350, 352, 355, 356, 359 3-4cr (7)

F. *Metatheoretical Perspectives in Psychology*: PSYC 410, 411 3cr

**Other Requirements:** 15-21

Foreign Language Intermediate Level 0-6cr (8)

Minor/Concentration 15cr

**Free Electives:** 8-17

**Total Degree Requirements:** 120

- (1) Students will enroll in PSYC 480 for 3cr in each of two semesters.
- (2) Students will enroll in PSYC 483 for 3cr in each of two semesters.
- (3) At least two must be content-based laboratory courses.
- (4) Credit toward the major will be given for only one of PSYC 310, 311, or 315.
- (5) Credit toward the major will be given for only one of PSYC 330 or 335.
- (6) Credit toward the major will be given for only one of PSYC 342 or 345.
- (7) Credit toward the major will be given for only one of PSYC 350 or 356.
- (8) Intermediate-level Foreign Language may be included in Liberal Studies electives.

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### Minor–Psychology 18-19

**Required Courses:**

PSYC 101 General Psychology (1) 3cr

PSYC 280 Psychological Inquiry *or* 3cr

PSYC 290 Research Design and Analysis I (2) 4cr

Four other PSYC electives beyond PSYC 101 (3, 4) 12cr

- (1) Meets Liberal Studies requirement.
- (2) Prerequisite: MATH 217.
- (3) Selected in consultation with the minor advisor.
- (4) Credit toward minor will be given for only one of PSYC 310, 311, or 315.

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### Minor–Psychological Science 17-18

**Required Courses:**

PSYC 101 General Psychology 3cr (1)

PSYC 290 Research Design and Analysis I 4cr (2)

One course from core areas A, B, or C 3-4cr (3)

One course from core areas D or E 3-4cr (3)

One PSYC elective 3-4cr

- (1) Meets Liberal Studies requirement.
- (2) Prerequisite: MATH 217.
- (3) At least one course must be a content-based laboratory course.



# Course Descriptions

Credit designation at right of title is expressed in (c) class hours per week, (l) lab or (d) discussion section hours per week, and (cr) number of credits per semester.

**ACCT: Accounting**  
**Department of Accounting**  
**Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

## **ACCT 200 Foundations of Accounting** 3c-01-3cr

Provides a framework in which nonbusiness majors can see how accounting relates to and reports on business activities. Introduces the basic financial accounting concepts, principles, and practices applied to the preparation and interpretation of the major financial statements. Takes a business process approach to the information requirements of external decision makers.

## **ACCT 201 Accounting Principles I** 3c-01-3cr

**Prerequisite:** Sophomore status (except for ACCT majors)  
Introduces the basic financial accounting concepts, principles, and practices applied to the preparation and interpretation of the major financial statements. Includes complete coverage of the accounting cycle which is designed to satisfy the information requirements of external decision makers. Topics covered are asset valuation, liability measurement, income determination, and equity activities. Integrated throughout is a discussion of ethical issues and considerations.

## **ACCT 202 Accounting Principles II** 3c-01-3cr

**Prerequisite:** ACCT 201  
Introduces traditional managerial accounting concepts and procedures utilized in the organization and processing of accounting information for management decision-making purposes. Topics include managerial accounting and the business environment, cost terms and concepts, cost systems, cost behavior, and cost-volume-profit analysis. Also covers the master budget, standard costing and variance analysis, performance evaluation, responsibility accounting, relevant cost analysis, and decision making.

## **ACCT 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

## **ACCT 299 Cooperative Education I** 0c-01-2cr

**Prerequisites:** Completion of 55cr with a minimum 2.0 GPA including a grade of C or better in ACCT 201, 202, and IFMG 241, and approval of the cooperative advisor

The initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting. The student is expected to complete subsequently ACCT 399 or an internship.

## **ACCT 300 Managerial Accounting** 3c-01-3cr

**Prerequisite:** ACCT 202 (not open to Accounting majors)  
Emphasizes the use of accounting information in performing the managerial functions of planning, control, decision making, and performance evaluation. *Note:* Accounting majors will not be granted degree credit for ACCT 300.

## **ACCT 303 Financial System Analysis** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 202  
Focuses on preparation and analysis of financial information for business performance and financial condition decisions. Financial accounting software is integrated throughout the course to demonstrate financial accounting system design. Basic accounting standards, concepts, and current issues underlying financial reporting are reviewed.

## **ACCT 304 Intermediate Accounting I** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 202  
Primarily focuses on financial reporting for asset wealth typically found in business environments. Coverage includes recognition and measurement of such assets as cash, receivables, investments, inventories, plant assets, and intangible assets. Present value concepts in financial reporting are also emphasized.

## **ACCT 305 Intermediate Accounting II** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 304  
Concentrates on financial reporting of creditor and investor claims on business assets in the form of liabilities and equity. Specialized financial reporting topics such as earnings per share, stock options, income tax, pension, and lease accounting are also covered.

## **ACCT 311 Cost Accounting** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 202  
Studies the aggregation and use of financial information for internal management decision-making. Discussions concentrate on cost management system design, cost estimation methods for budget preparation and achievement, cost accumulation methods for manufacturing and service organizations, inventory control procedures, transfer pricing administration, and managerial performance evaluation techniques.

## **ACCT 399 Cooperative Education II** 0c-01-3cr

**Prerequisites:** ACCT 299, completion of 85cr with a cumulative 2.0 GPA, a 2.3 GPA in ACCT 304, 305, and 311 with a grade of C or better in each course, and approval of the cooperative advisor  
The subsequent course in cooperative education combines classroom theory with practical application through job-related experiences. Students are actively employed in the accounting area in business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives in accounting.

## **ACCT 401 Advanced Accounting** 3c-01-3cr

**Prerequisite:** ACCT 305  
A study of accounting issues of specialized nature including partnerships, organization and liquidation, agency and branch accounting, accounting for business combinations, preparation of consolidated financial statements, accounting for government and not-for-profit entities, accounting for estates and trusts, and receivership accounting.

## **ACCT 412 Advanced Cost Accounting** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 311  
A study of budgets, standard costs, direct and absorption costing, analysis of cost variances, and extensive analysis of various cost control and profit planning programs.

## **ACCT 421 Federal Tax I** 3c-01-3cr

**Prerequisite:** Grade of C or better in ACCT 202  
Introduces the fundamental concepts of federal taxation, with special emphasis on individuals. Creates an awareness and recognition of the tax consequences involved in financial decision-making, with special emphasis on use of professional tax software and Internet resources.

## **ACCT 422 Federal Tax II** 3c-01-3cr

**Prerequisite:** ACCT 421  
Introduces the fundamental concepts of federal taxation of corporations, partnerships, estates, and gift transactions. Creates an awareness and recognition of the tax consequences involved in financial decision-making, with special emphasis on use of professional tax software, the Internal Revenue Code and Regulations, and Internet research.

## **ACCT 431 Auditing** 3c-01-3cr

**Prerequisite:** ACCT 304  
A study of auditing theory and practical application of auditing standards and procedures to the review, testing, and evaluation of accounting controls

and to the verification of transactions and balances to express an opinion in an audit report on the fairness of financial statements' presentation.

**ACCT 432 Forensic and Internal Auditing** 3c-01-3cr

**Prerequisite:** ACCT 431

Introduces forensic auditing in fraudulent financial reporting and employee theft. Also covers the foundation of internal auditing and operational audits performed by internal auditors.

**ACCT 441 Accounting for Government and Nonprofit Organizations** 3c-01-3cr

**Prerequisite:** ACCT 305

Presents the views of authoritative professional organizations as to desirable standards of accounting and reporting for governmental and nonprofit entities. Topics include budgeting and budgetary accounts, accounting for various funds, the general fixed assets group of accounts, the financial reporting process, and application of the principles of fund accounting in specific areas.

**ACCT 451 Seminar in Accounting Standards** 3c-01-3cr

**Prerequisite:** ACCT 305

A study of professional standards having authoritative support in the field of accounting. APB opinions, FASB interpretations, and SEC Accounting Series Releases are discussed.

**ACCT 461 Accounting Systems** 3c-01-3cr

**Prerequisites:** ACCT 305, 311, IFMG 300

A study of concepts, principles, and procedures of accounting system design, installation, implementation, auditing, and maintenance in relating to system objectives, information requirements, constraints, system elements, and considerations on a computerized basis.

**ACCT 471 International Accounting** 3c-01-3cr

**Prerequisite:** ACCT 311 for ACCT majors or ACCT 300 for non-ACCT majors

A comparative study of the effects of differences in cultural and business philosophies on national and international accounting policies. Specific financial accounting controversies, such as accounting for transactions involving foreign currency exchanges, are discussed. International management accounting topics include international transfer pricing policies, performance evaluations of multinational managers and divisions, and management information systems. International aspects of financial planning, auditing, and taxation practices are also reviewed.

**ACCT 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**ACCT 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ACCT 488 Internship in Accounting (Industrial and Government)** 6cr

**Prerequisites:** Consent of department chairperson and dean, Eberly College of Business and Information Technology; cumulative 2.75 GPA and 3.0 GPA in ACCT courses

Practical experiences, generally totaling 400 hours, in an industrial or government accounting setting.

**ACCT 493 Internship in Accounting (Public)** 6cr

**Prerequisites:** Consent of department chairperson and dean, Eberly College of Business and Information Technology; 3.00 cumulative GPA and 3.00 GPA in ACCT courses

Practical experiences, generally totaling 400 hours, with a public accounting firm.

**ADVT: Advising and Testing  
Advising and Testing Center  
Division of Student Affairs**

**ADVT 170 Career Exploration** 1c-01-1cr

Introduces the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers. Notes: 1) Certain sections of this course will be restricted to specific enrollment groups. 2) Offered as ED 170 prior to 1997-98. 3) Cross-listed as DVST 170. These courses may be substituted for each other and be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**ANTH: Anthropology  
Department of Anthropology  
College of Humanities and Social Sciences**

**ANTH 110 Contemporary Anthropology** 3c-01-3cr

An introduction to the nature of anthropological inquiry. By using the anthropological perspective, current relevant topics are discussed. Topics could include, but are not limited to, changing myths and rituals, legal anthropology, cross-cultural aspects of aging, gender roles, evolutionism and creationism, cultural extinction, and world hunger.

**ANTH 211 Cultural Anthropology** 3c-01-3cr

Explores the nature of culture as a human survival technique. Provides a framework for appreciation and understanding of cultural differences and similarities in human societies, past and present.

**ANTH 213 World Archaeology** 3c-01-3cr

A survey of the prehistory of Western and non-Western cultures with an emphasis on the development of technology and on the evolution of adaptive strategies with particular attention to the origins of agriculture. Exposes the students to the diversity of past cultural systems and to the methodological and theoretical questions of concern to archaeologists.

**ANTH 222 Biological Anthropology** 3c-01-3cr

An introduction to the goals and techniques of biological anthropology with an emphasis on primatology, paleoanthropology, genetics, and osteology. Provides a basis for evaluating the role of biology in human behavior.

**ANTH 233 Language and Culture** 3c-01-3cr

Focuses on social and cultural functions of language. Particular emphasis given to problems in anthropology with respect to non-Western languages.

**ANTH 244 Basic Archaeology** 3c-01-3cr

An introduction to the goals and methods of anthropological archaeology with particular attention to the analysis of cultural chronology, past lifeways, and cultural process. Provides laboratory experience with artifacts and other archaeological data.

**ANTH 271 Cultural Area Studies: Africa** 3c-01-3cr

Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as SOC 271; may not be taken for duplicate credit.)

**ANTH 272 Cultural Area Studies: China** 3c-01-3sh

Assists in developing an understanding of contemporary China. While the course begins with prehistoric and historic aspects of China, the focus is on contemporary issues presented in the context of anthropological theory. Specific Chinese cultural components investigated include values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as SOC 272; may not be taken for duplicate credit.)

- ANTH 273 Cultural Area Studies: Southeast Asia** 3c-01-3cr  
An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in the area and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the Green Revolution, tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as SOC 273; may not be taken for duplicate credit.)
- ANTH 274 Cultural Area Studies: Latin America** 3c-01-3cr  
An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as SOC 274; may not be taken for duplicate credit.)
- ANTH 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.
- ANTH 286 Marriage, Kinship, and the Family** 3c-01-3cr  
A sociological and anthropological study of patterns of marriage, kinship, and family life, emphasizing the relationship between family patterns and other social institutions. Topics include the family and marriage in historical and comparative perspective, worldwide patterns of gender stratification, incest and incest avoidance, class and race contexts of family patterns, mate selection and love, parenthood and child rearing, domestic and sexual violence, alternative family lifestyles, and the current crisis and possible future of the family. Intended for a broad audience but also open to sociology and anthropology majors and minors. (Also offered as SOC 286; may not be taken for duplicate credit.)
- ANTH 314 Native Americans** 3c-01-3cr  
A survey of culture history and culture area characteristics of the Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.
- ANTH 315 North American Archaeology** 3c-01-3cr  
**Prerequisite:** ANTH 110 or 244 or instructor permission  
A survey of North American prehistory with an emphasis on cultural ecology and technology. Attention is given to all geographic areas north of Mexico, but the focus is on the Eastern Woodlands.
- ANTH 316 Anthropology of Religion** 3c-01-3cr  
**Prerequisite:** ANTH 110 or 211  
Explores nature, function, and universal characteristics of religion in human society by utilizing cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.
- ANTH 318 Museum Methods** 3c-01-3cr  
**Prerequisite:** ANTH 110 or 211 or 244  
Lecture and laboratory course surveying the role of museums as social and educational institutions, types of museums, museum administration, and museum architecture. Procedures for collection, curation, preservation, and storage of anthropological and natural history specimens examined.
- ANTH 320 Archaeological Field School** var-6cr  
**Prerequisites:** ANTH 110, 244, or instructor permission  
An introduction to archaeological survey, field excavation, and laboratory processing. Field school students participate in one or more of the ongoing research projects of the IUP Archaeology Program.
- ANTH 323 Mesoamerican Archaeology** 3c-01-3cr  
An introduction to the archaeology of Mesoamerica which explores the natural and cultural diversity of the area south of the United States and north of lower Central America. Surveys the history of archaeological research in Mesoamerica and examines some of the specific methods of archaeological research that are unique to Mesoamerican archaeology. The focus is on three areas: the Gulf Coast and the Olmecs, The Valley of Mexico and its long history of settlement from the Tehuacan Valley through the Aztecs, and the southern Highlands and Lowlands inhabited by the Maya, although other regions of Mesoamerica are discussed.
- ANTH 325 Archaeological Lab Methods** 3c-01-3cr  
**Prerequisite:** ANTH 244  
A hands-on introduction to the study of artifacts and other cultural materials recovered from archaeological excavations. Experience in the specific methods of analysis in archaeological lab settings focusing on the analysis of stone artifacts, pre-Columbian ceramics, and historic artifacts. Analytic techniques include classification, quantification of attributes, and reporting of the results of the analyses.
- ANTH 340 Anthropology of Aging** 3c-01-3cr  
Introduces various experiences faced by elderly people in numerous world societies. Explores the impact of such factors as ethnicity, nationality, race, and class and the processes of cultural change on the lives of people growing old. Comparative, cross-cultural perspectives are stressed.
- ANTH 350 Anthropology of Women** 3c-01-3cr  
For any student with an interest in the lives of women around the world, regardless of whether or not he or she has a strong background in anthropology. Examines the social roles, rights, and responsibilities of women cross-culturally, viewing both women's productive (economic) functions as well as reproductive functions. Reading describes the position of women in technologically simple societies and addresses the comparative position of women in the industrialized socialist and capitalist countries. The central theme is an examination of how the position of women changed in the twentieth century.
- ANTH 360 Applied Anthropology** 3c-01-3cr  
Applied anthropology focuses on the anthropologist as an agent of social change and bridges the gap between theories of cultural behavior and the policies which affect contemporary cultures. Examines the historical role of anthropologists in early public administration and then examines at length the work of contemporary applied anthropologists in programs of international economic development (health, agriculture, and education), in domestic human service planning and delivery, in cultural resource preservation, and in their role as advocates for unempowered minorities.
- ANTH 365 Native North American Religions** 3c-01-3cr  
An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. Not only examines major religious themes and dimensions (myth, ritual, ethics, etc.), but also includes a historical perspective on North American Indian lifeways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change. (Also offered as RLST 365; may not be taken for duplicate credit)
- ANTH 370 Latinos and Diasporas** 3c-01-3cr  
Introduces the global and local dimensions of the changing Latino communities in the United States and examines the communities' multiple connections and dynamic interactions with Latin American diasporas. Toward this end, the course covers: 1) theories on transnational communities, diasporas, the state, and citizenship; 2) Latino cultures and geography; 3) Latin American immigration and labor migration to the United States; and 4) the impact of Latin American diasporic networks on Latino and non-Latino communities. (Cross-listed as LAS 370)
- ANTH 401 Social and Cultural Change** 3c-01-3cr  
**Prerequisite:** ANTH 110 or SOC 151  
Explores current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.
- ANTH 415 Cultural Resource Management** 3c-01-3cr  
**Prerequisite:** ANTH 244 or instructor permission  
Provides an understanding of how cultural resources are being preserved and managed under current American laws and regulations with particular em-

phasis on historic properties, such as historic buildings and archaeological sites. Case studies and field trips are incorporated so that students gain a thorough understanding of key problems and issues in historic preservation and cultural resource management.

**ANTH 420 Cultural Ecology** 3c-01-3cr

**Prerequisite:** ANTH 110 or 211

Introduces the field of ecological anthropology by exploring the concept of the ecosystem in relationship to varying human adaptive strategies. Illustrates the importance of understanding man-environment interactions both in studying the developing world and in investigating the past.

**ANTH 425 Archaeological Theory and Research Design** 3c-01-3cr

**Prerequisites:** ANTH 244 and 325

Reviews the broad range of field, analytical, and interpretive methods adopted by archaeologists over the past century and guides students through the design and implementation of a research project of their own. Discussed against the backdrop of the discipline's constantly shifting theoretical setting, this survey also prepares students for the task of critically assessing published research conducted by other archaeologists and locating such research within this dynamic theoretical landscape.

**ANTH 430 Anthropology of Food** 3c-01-3cr

All humans must obtain food in order to ensure their subsistence, but the ways in which we satisfy this basic physiological need are not the same for everyone. Examines how human evolutionary history influences contemporary consumption patterns. Discusses how patterns of human migration influenced the development of cuisines and how what we eat is often determined by historical patterns of colonization and contemporary political struggles. Discusses the cultural basis for definitions of what is edible and what is prohibited. Examines patterns of food use in our culture and how science may influence our patterns in years to come.

**ANTH 444 Medical Anthropology** 3c-01-3cr

**Prerequisite:** 9cr in ANTH or permission

Focuses on the study of human confrontation with disease and illness and on the adaptive arrangements made by various human groups for dealing with these dangers. Health and disease are viewed from a broad array of micro and macro perspectives, e.g., evolutionary, ecological, and psychosocial. For nursing and social work students as well as social and biological sciences students.

**ANTH 456 Ethnographic Research Methods** 3c-01-3cr

**Prerequisite:** 9cr in ANTH

Provides a background in qualitative and quantitative techniques used in anthropological research. Concentrates on the ethics of research with people, formulation of hypotheses, design and use of appropriate research techniques, and data analysis. Emphasizes development of field notes, interviewing techniques, developing genealogies, and participant observation.

**ANTH 460 Ethnographic Field School** 6c-01-6cr

**Prerequisite:** ANTH 456 or instructor permission

Ethnographic research training in the field. Emphasizes the application of qualitative research methods, the recording of data in research journals and the maintaining of field diaries, the categorizing and organizing of data, and the writing of research reports.

**ANTH 480 Anthropology Seminar** var-1-3cr

**Prerequisite:** 9cr in ANTH or permission

A seminar approach to the integration of the fields of anthropology. Assists the advanced student in understanding the nature of anthropology, the major theoretical issues, and the history of intellectual development.

**ANTH 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with an interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ANTH 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**ANTH 484 Specialized Methods in Archaeology** 3c-01-3cr

Provides an opportunity to learn specialized techniques and approaches presently in use in archaeology. In any one semester, will concentrate on one of a range of possible themes, including lab methods, field methods, statistical methods, computer applications, or text-based approaches. The specific topic varies but focuses on instructing in the mechanics of the selected technique, its application to real archaeological problems, and the interpretation of the results. May appeal to students from other disciplines who wish to gain applied expertise in a topic that is relevant to their own field of study. Interested students should contact the instructor to find out which topic will be taught in any one semester.

**ANTH 485 Anthropological Study Odyssey** var-3cr

**Prerequisite:** Instructor permission

Involves exploration of an anthropological topic such as a culture or archaeological tradition through classroom and field activities. Typically, students are exposed to the topic during several days of intensive classwork and then pursue greater understanding through travel and possibly limited fieldwork. Readings, site tours, on-site lectures by specialists, and field exercises give students a chance to develop an understanding of anthropological perspectives on the topic under study as well as to provide exposure to anthropological field and analytic methods. The odyssey also intends to allow students to experience other cultures, sites, and/or locales firsthand. May be repeated for credit under a different odyssey title but may be used only once to meet the requirements of an Anthropology track.

**ANTH 493 Internship in Anthropology** var-3-12cr

**Prerequisite:** Instructor permission

Offers practical experience in any of the specialized fields of anthropology (physical, social-cultural, archaeology, or linguistics). Each student develops objectives in consultation with a particular departmental faculty member who is supervising the internship. Detailed field notes and a major paper based on the experience are required.

**APMU: Applied Music**

**Department of Music**

**College of Fine Arts**

**APMU Applied Music (Major Area)**

**Instrument/Voice I-VIII**

var-2 or 4cr

**Prerequisite for initial semester of study:** Audition and acceptance to the area of concentration

**Prerequisite for subsequent semesters:** Grade of C or better in the previous semester of study

Private instrumental or vocal instruction for music majors in their primary area of concentration for up to eight semesters. Includes technical studies, musical repertoire, and performance experiences at the professional level. Weekly half-hour lessons are given (2cr) for students enrolled in the B.S. and B.A. degree programs. Weekly one-hour lessons (4cr) are given for students enrolled in the B.F.A. degree program only.

**APMU Applied Music (Minor Area) Instrument/Voice I-IV** var-1 cr

**Prerequisite for initial semester of study:** Audition and placement

**Prerequisite for subsequent semesters:** Grade of C or better in the previous semester of study

Private instrumental or vocal instruction for music minors, or for music majors in their secondary or tertiary area of concentration for up to four semesters. Includes technical studies, musical repertoire, and performance experiences at a functional level. Students enroll for 1 credit and are given weekly half-hour lessons. Students may enroll in Levels I-IV only from the following list.

**APMU 101, 151, 201, 251, 301, 351, 401, 451 Piano I-VIII**

**APMU 102, 152, 202, 252, 302, 352, 402, 452 Organ I-VIII**

APMU 103, 153, 203, 253, 303, 353, 403, 453 Harpsichord I-VIII  
 APMU 104, 154, 204, 254, 304, 354, 404, 454 Harp I-VIII  
 APMU 105, 155, 205, 255, 305, 355, 405, 455 Voice I-VIII  
 APMU 106, 156, 206, 256, 306, 356, 406, 456 Violin I-VIII  
 APMU 107, 157, 207, 257, 307, 357, 407, 457 Viola I-VIII  
 APMU 108, 158, 208, 258, 308, 358, 408, 458 Cello I-VIII  
 APMU 109, 159, 209, 259, 309, 359, 409, 459 String Bass I-VIII  
 APMU 110, 160, 210, 260, 310, 360, 410, 460 Flute I-VIII  
 APMU 111, 161, 211, 261, 311, 361, 411, 461 Clarinet I-VIII  
 APMU 112, 162, 212, 262, 312, 362, 412, 462 Oboe I-VIII  
 APMU 113, 163, 213, 263, 313, 363, 413, 463 Bassoon I-VIII  
 APMU 114, 164, 214, 264, 314, 364, 414, 464 Saxophone I-VIII  
 APMU 115, 165, 215, 265, 315, 365, 415, 465 Trumpet I-VIII  
 APMU 116, 166, 216, 266, 316, 366, 416, 466 French Horn I-VIII  
 APMU 117, 167, 217, 267, 317, 367, 417, 467 Trombone I-VIII  
 APMU 118, 168, 218, 268, 318, 368, 418, 468 Euphonium I-VIII  
 APMU 119, 169, 219, 269, 319, 369, 419, 469 Tuba I-VIII  
 APMU 120, 170, 220, 270, 320, 370, 420, 470 Percussion I-VIII  
 APMU 121, 171, 221, 271, 321, 371, 421, 471 Guitar I-VIII

**APMU 122 Applied Jury A** **0c-01-0cr**  
**Prerequisite:** APMU Applied Music (Major Area)—all required levels  
 Adjudicates the performance of students in their respective major performance area (on a “Pass” or “Fail” basis) as partial fulfillment of the graduation requirements in the B.S.Ed.—Music and B.F.A.—Music degrees. Students are expected to attain a professional level of performance on all of their required major area juries in order to receive a passing grade.

**APMU 123 Applied Jury B** **0c-01-0cr**  
**Prerequisite:** APMU Applied Music (Major Area)—all required levels  
 Adjudicates the performance of students in their respective major performance area (on a “Pass” or “Fail” basis) as partial fulfillment of the graduation requirements in the B.S.Ed.—Music degree. Students are expected to attain a functional level of performance on all of their required minor area juries in order to receive a passing grade.

**APMU 124 Applied Jury C** **0c-01-0cr**  
**Prerequisite:** MUSC Class Piano I and II or APMU (Minor) I and II  
 Adjudicates the performance of students in their respective major performance area (on a “Pass” or “Fail” basis) as partial fulfillment of the graduation requirements in the B.S.Ed.—Music degree program. Students are expected to attain a fundamental level of proficiency on piano as indicated by passing the Piano C Jury.

**APMU 480 Wind and Percussion Pedagogy** **2c-01-2cr**  
**Prerequisites:** Completion of six semesters of APMU at the 4cr level; concurrent enrollment with seventh or eighth semester of APMU, or instructor permission  
 The study of specific techniques of and pedagogical approaches for woodwind, brass, or percussion instruments in both individual and classroom situations.

**APMU 482 Independent Study** **var-1-3cr**  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office  
 Students with interest in an independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ARED: Art Education**  
**Department of Art**  
**College of Fine Arts**

**ARED 281 Special Topics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ARED 315 Issues of Art in K-12 Programs** **3c-01-3cr**  
 A seminar to introduce the art education major to the principles and practices of teaching visual arts K through 12. Field experiences, prestudent teaching activities, introduction to literature, and history and philosophies of art education emphasized. Taught Fall semester only. (Prerequisite to student teaching)

**ARED 317 Art in K-6 Programs** **1c-31-3cr**  
 Examines children’s artistic development, art programs, planning, motivation, and evaluation. Weekly teaching experience is an integral part of the course. Taught Fall semester only. (Prerequisite to student teaching)

**ARED 318 Art in 7-12 Programs** **1c-31-3cr**  
 The relationship of art education to the total secondary curriculum is studied to determine goals of junior-senior high school art. The adolescent creative products are analyzed to help the prospective art teacher to identify with problems of students. Taught Spring semester only. (Prerequisite to student teaching)

**ARED 320 Art Criticism and Aesthetics in K-12 Programs** **3c-01-3sh**  
**Prerequisites:** ARED 315 (minimum C grade) and ARED major  
 Secure the knowledge and skills necessary to teach a program of comprehensive art that includes the discipline of art criticism. Establishes theoretical frameworks for writing intelligently and talking about art with students from a critical perspective. Also provides opportunities for developing curricular and pedagogical materials appropriate for teaching art.

**ARED 321 Art History Inquiry for K-12 Art Programs** **3c-01-3sh**  
**Prerequisites:** ARED 315 (minimum C grade) and ARED major  
 Explores methods, media, and activities that integrate art history content into the school art curriculum. Students plan and execute lessons which are appropriate at various grade levels and which emphasize art history and knowledge of artistic diversity worldwide. Students prepare one unit on a selected theme, in addition to other written or artistic assignments. Preparation of art history-related projects and instructional materials for classroom use are also components.

**ARED 322 Studio Inquiry for K-12 Programs** **3c-01-3sh**  
**Prerequisites:** ARED 315 (minimum C grade) and ARED major  
 Art processes, media, and techniques suitable for teaching art to elementary and secondary students are examined and researched as modes of learning and creating. A major focus is on developing curricula and pedagogical materials relating to the theory and practice of teaching art, as well as integrating studio experiences with art criticism, art history, and aesthetics. Students apply demonstrated techniques and processes to sample projects and combine these with research into a portfolio for teaching studio art within comprehensive art lessons.

**ARED 481 Special Topics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**ARED 482 Independent Study** **var-1-3cr**  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office  
 Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ARHI: Art History**  
**Department of Art**  
**College of Fine Arts**

**ARHI 100 Arts of the Twentieth Century** **3c-01-3cr**  
**Prerequisite:** Art majors and minors only  
 A study of art in the U.S. during 1900-1960 in light of historical events and in the broader context of political, philosophical, religious, and social developments, including women and underrepresented groups as subjects,

creators, and patrons of the arts. An introductory course for incoming art majors. Primary focus on painting, photography, and film.

**ARHI 101 Introduction to Art** 3c-01-3cr  
Introduces the student to the significance of art as related to contemporary living and our historical heritage.

**ARHI 205 Ancient to Medieval Art** 3c-01-3cr  
A study of art from prehistoric times to the Middle Ages. Humankind's artistic development is seen in relation to political, social, economic, and religious events.

**ARHI 207 Renaissance through Modern Art** 3c-01-3cr  
Studies art from the Renaissance through the Modern periods in western Europe in light of historical events and in the broader context of political, philosophical, religious, and social developments, including women and underrepresented groups as subjects, creators, and patrons of the arts. Issues of exoticism, Orientalism, and colonialism are discussed.

**ARHI 222 Art in America** 3c-01-3cr  
Surveys American art and its relation to the development of American ideas and ideals.

**ARHI 224 Introduction to Asian Art** 3c-01-3cr  
Surveys a selection of art and architectural forms from China, Japan, India, Korea, and Southeast Asia. Students are introduced to religious and secular sculpture, painting, and ceramics, as well as the philosophical, political, and social forces that prompted their creation.

**ARHI 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ARHI 300 Native American Art** 3c-01-3cr  
**Prerequisites:** ARHI 101, junior standing, or permission  
A survey of the broad forms of visual arts and crafts that reflects the lifeways of Native Americans from paleo-indian origins to A.D. 1900.

**ARHI 321 History of World Ceramics** 3c-01-3cr  
Analyzes the development of ceramics from its beginnings to the present. Emphasizes the historical and social context and changing aesthetics of ceramic production, with special focus on the pottery of East Asia and Islamic cultures.

**ARHI 407 Medieval Art** 3c-01-3cr  
Art and architecture of Europe during the Middle Ages, beginning with early Christian and Byzantine and concluding with the Gothic period. Dual listed for graduate credit as ARHI 507.

**ARHI 408 Italian Renaissance Art** 3c-01-3cr  
Italian art from 1400s through 1650 and Mannerist movement. Special attention paid to great masters of the period. Dual listed for graduate credit as ARHI 508.

**ARHI 409 Baroque and Rococo Art** 3c-01-3cr  
A general survey of art from 1575 to 1775, includes architecture, sculpture, painting, and other arts. Dual listed for graduate credit as ARHI 509.

**ARHI 410 Nineteenth-Century European Painting** 3c-01-3cr  
**Prerequisite:** Junior standing or instructor permission  
Surveys the history of Western painting from the late eighteenth century to the turn of the twentieth. The styles and movements covered range from neo-classicism to romanticism, realism, the Pre-Raphaelite painters, impressionism, symbolism, and post-impressionism. French painting is most heavily represented. Activities include lecture mixed with discussion of readings, debates about issues, practice in "reading" images, and others.

**ARHI 411 Twentieth-Century European Art** 3c-01-3cr  
Studies twentieth-century painting, sculpture, photography, and film in France, Germany, and Italy in light of historical events and in the broader context of political, philosophical, religious, and social developments,

including women and underrepresented groups as subjects, creators, and patrons of the arts.

**ARHI 412 Classical Art** 3c-01-3cr  
A historical survey of the architecture, painting, sculpture, and minor arts of the classical period of Greece and Rome, including the Minoan, Mycenaean, and Etruscan cultures.

**ARHI 413 Senior Seminar** 3c-01-3cr  
Helps students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

**ARHI 416 Northern Renaissance Art** 3c-01-3cr  
Explores phenomena of art north of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria, and the court at Prague.

**ARHI 417 Byzantine Art** 3c-01-3cr  
**Prerequisite:** ARHI 205 or instructor permission  
Investigates the art and architecture produced in the Byzantine Empire, with a concentration on the years between 324, the year Constantine founded Constantinople, and 1453, the date the Turks conquered the city. Consisting of lectures, discussions, videos, and field trips, the course emphasizes cross-cultural contacts between Byzantium, Islam, and the West.

**ARHI 418 African Art** 3c-01-3cr  
Explores the aesthetics and meanings of African Art through a historically and culturally based survey of art from selected African cultures. Examples of sculptures, masks, and other ritual objects, tools and utilitarian objects, clothing, jewelry and adornment, painting, and architecture from across the continent are studied. Philosophical and religious beliefs, socioeconomic, historical, and political forces are examined as to how they have impacted the creation of art in traditional and contemporary Africa. Connections between the visual arts and the other fine arts are an integral part of the study as well.

**ARHI 423 Art of Japan** 3c-01-3cr  
Introduces the history and aesthetics of Japanese art, from antiquity to the present. Lectures focus on major works of painting, sculpture, architecture, prints, ceramics, and other works from antiquity to the present. Close attention is paid to their historical contexts and underlying themes. These include religious influences, the imperial court, the tea ceremony, and modern life. The interaction of Japan with its neighbors is also considered.

**ARHI 424 Art of India and Southeast Asia** 3c-01-3cr  
Analyzes the arts of India and Southeast Asia, past and present. Examines representative examples from major periods, emphasizing the cultural, political, and/or religious context of the work.

**ARHI 425 Arts of China** 3c-01-3cr  
Surveys art selected from the five millennia of Chinese art and culture. Examines sculpture, architecture, and painting from the Neolithic period through the twentieth century. Issues of religion, patronage, and popular culture are included.

**ARHI 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**ARHI 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ARHI 493 Internship** var-3-12cr

For ARHI majors who wish to receive practical experience working within professional situations that relate to the student's artistic and occupational goals.

**ART: Art (Studio)**

**Department of Art**

**College of Fine Arts**

**ART 111 Figure Drawing** 0c-6l-3cr

A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matter.

**ART 112 Fundamentals of Drawing** 0c-6l-3cr

Seeks to integrate basic principles and fundamentals of drawing and design.

**ART 113 Three-Dimensional Design** 0c-6l-3cr

Basic elements and principles of design are studied. A course in design in three dimensions.

**ART 114 Color and Two-Dimensional Design** 0c-6l-3cr

Focuses on the consistent properties of color and the manner in which two-dimensional design can be organized. Specific attention is given to the complex interactions of color within two-dimensional design.

**ART 211 Painting** 0c-6l-3cr

An introduction to painting in which a variety of materials, techniques, and approaches are explored.

**ART 213 Woodworking: Function and Form** 0c-6l-3cr

Involves the study of woodworking and furniture design as it relates to the individual designer-artist. Students experience a formal background in both woodworking technique and the application of design.

**ART 214 Ceramics** 0c-6l-3cr

A general introduction to the techniques and aesthetics of clay. The student works both at the wheel and with hand building methods.

**ART 215 Sculpture** 0c-6l-3cr

An introduction to sculpture with an emphasis on study of form as well as visualizing in the third dimension.

**ART 216 Jewelry and Metals** 0c-6l-3cr

**Prerequisite:** ART 113 or instructor permission

An introduction to jewelry and metals with an emphasis upon the design and creation of functional and non-functional art objects. Basic processes of metal fabrication will be the focus.

**ART 217 Print Media** 0c-6l-3cr

An introduction to basic techniques of print media including planographic, relief, and electronic processes.

**ART 218 Introduction to Graphic Design** 0c-6l-3cr

**Prerequisites:** ART 112, 114

A survey of graphic design, exploring creative problem-solving techniques. Introduces the importance of concept development, aesthetics, symbolism, typography, and computer method. Studio experience provides a wide range of experiences for the beginning graphic design student. Projects, problems, and exercises will deal with skills, principles, application, and theory.

**ART 219 Fibers** 0c-6l-3cr

Provides an introductory working knowledge in design and execution of projects in non 4/harness loom weaving and related fabric areas. Other fiber techniques, including handmade paper, are available for exploration as desired.

**ART 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ART 316 Intermediate Jewelry and Metals** 0c-6l-3cr

**Prerequisite:** ART 216

Technical expertise is further developed, gradually shifting from formal techniques to experimentation and individual expression. Various techniques, including casting, stone setting, and an introduction to smithing is explored.

**ART 355 Intermediate Graphic Design I** 0c-6l-3cr

**Prerequisite:** ART 218

An intermediate-level study in graphic design focusing on digital illustration, complex typography, and publication design. Studio experience will focus on current professional 2-D digital illustration software.

**ART 356 Intermediate Graphic Design II** 0c-6l-3cr

**Prerequisite:** ART 218

**Recommended Prerequisite:** ART 355

An intermediate-level study in graphic design, researching publication design, grid systems, and multipage design. Studio experience will focus on current professional software used for publication design.

**ART 400 Professional Practices** 3c-0l-3cr

**Prerequisites:** B.F.A. or B.A. Studio majors only, senior status

Professional practices for the visual artist. Major issues may include the development of a thesis exhibition, resume development, an artist's professional image, portfolio development, marketing skills, career opportunities, and grant writing.

**ART 421 Advanced Drawing** 0c-6l-3cr

**Prerequisites:** ART 111, 112

Meets the needs of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are on an individual basis.

**ART 451 Advanced Woodworking: Function and Form** 0c-6l-3cr

**Prerequisite:** ART 213

Offers advanced training and skills involving the study of contemporary furniture design and woodworking. Emphasizes a technical and aesthetic point of view.

**ART 452 Advanced Ceramics** 0c-6l-3cr

**Prerequisite:** ART 214

Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

**ART 453 Advanced Sculpture** 0c-6l-3cr

**Prerequisite:** ART 215

An opportunity to pursue independent study in sculpture. Materials and processes are individually chosen and the work related to broadening concepts.

**ART 454 Advanced Painting** 0c-6l-3cr

**Prerequisite:** ART 211

Individual experimentation and exploration by the painter and investigation of the various technical approaches.

**ART 455 Advanced Graphic Design I** var-3, 6cr

**Prerequisites:** ART 218, 355; instructor permission is required for 6cr studio

**Recommended Prerequisite:** ART 356

Introduces three-dimensional modeling and rendering for illustration and animation. Studio experience will focus on current professional 3-D software.

**ART 456 Advanced Graphic Design II** var-3, 6cr

**Prerequisites:** ART 218, 355; instructor permission required for 6cr studio

**Recommended Prerequisites:** ART 356, 455

An exploration of web page and interactive design. Studio experience will focus on current professional web and interactive software.

**ART 457 Advanced Print Media** var-3, 6cr

**Prerequisite:** ART 217, permission is required for 6cr studio

Student elects to study a print media process or processes in greater depth and works toward developing personal visual language and techniques ranging from the traditional to the nontraditional.

**ART 459 Advanced Fibers** 0c-6l-3cr

**Prerequisite:** ART 219

Provides a working knowledge in design and execution of projects in weaving and related areas. Other fiber techniques, including handmade paper, are available for the students to explore as desired.

**ART 460 Advanced Jewelry and Metals** 0c-6l-3cr

**Prerequisite:** ART 216 or permission

Technical expertise is further developed to challenge each individual to understand the relationship of concept to the completed object whether it is jewelry, holloware, or a nonfunctional object. Various techniques are investigated in pursuit of a personal expression and aesthetic. May be repeated for credit.

**ART 481 Special Topics** var-1-3cr

May provide an in-depth study of a narrowly defined area of the discipline. Subject matter may change with repeated offering of the course. May be repeated for credit.

**ART 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ART 493 Internship** var-3-12cr

For art majors who wish to receive practical experience working within professional situations which relate to the student's artistic and occupational goals.

**ASIA: Asian Studies**

**College of Humanities and Social Sciences**

**ASIA 200 Introduction to Asian Studies** 3c-0l-3cr

Focuses on the significance of interactions between Asian cultures. It does so in such a way that students are able to appreciate both the continuities that allow one to speak of Asia as a coherent region (not only geographically, but also politically, economically, and culturally) and the very real differences that give the region its great variety. Also stresses an in-depth understanding of subtle transformations in meaning as goods, ideas, and practices migrate from one area within Asia to another.

**BIOC: Biochemistry**

**Biochemistry Program**

**College of Natural Sciences and Mathematics**

**BIOC 301 Biochemistry I** 3c-0l-3cr

**Prerequisites:** BIOL 111, CHEM 232

An introduction to biochemistry emphasizing the structure and function relationships of proteins, enzymes, and vitamins; bioenergetics; and the metabolism of carbohydrates and lipids.

**BIOC 302 Biochemistry II** 3c-0l-3cr

**Prerequisite:** BIOC 301

A continuation of BIOC 301 concerning the metabolism of nitrogen, amino acids, nucleotides, and nucleic acids and the function of cell membranes, hormones, and specialized tissues.

**BIOC 311 Biochemistry Laboratory I** 0c-4l-1cr

**Prerequisites:** BIOL 111, CHEM 232

A companion to BIOC 301 including experiments in photometry, enzyme kinetics and purification, lipid isolation and characterization, electron transport in respiration and photosynthesis, and use of radioisotopes.

**BIOC 312 Biochemistry Laboratory II** 0c-4l-1cr

**Prerequisite:** BIOC 311

A companion to BIOC 302 including experiments in membrane characterization, properties of amino acids, isolation and function of nucleic acids, and synthesis of proteins and nucleic acids.

**BIOC 401 Laboratory Methods in Biology and Biotechnology** 2c-4l-3cr

**Prerequisite:** CHEM 351 or BIOC 301

Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology. (Also offered as BIOL 401; may not be taken for duplicate credit)

**BIOC 480 Biochemistry Seminar I** 1c-0l-1cr

**Prerequisites:** BIOC 302, 312

A discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, and library or laboratory research. Guest lecturers. The combination BIOC 480-490 counts as one writing-intensive course.

**BIOC 481 Special Topics in Biochemistry** var-1-3cr

**Prerequisite:** BIOC 302 or CHEM 351

A lecture-discussion course of recent biochemical topics or those of unique interest. Topic and instructors to change annually.

**BIOC 482 Independent Research in Biochemistry** var-1-3cr

**Prerequisites:** BIOC 302 and 312, permission by program coordinator

Student conducts a research project in any area of biochemistry. Work supervised by faculty. Does not involve regular class or lab hours. Enrollment by permission only.

**BIOC 490 Biochemistry Seminar II** 1c-0l-1cr

**Prerequisites:** BIOC 302, 312, and 480

A discussion of recent trends in biochemical thought. Oral and written reports on assigned readings, and library or laboratory research. Guest lecturers. The combination BIOC 480-490 counts as one writing-intensive course.

**BIOL: Biology**

**Department of Biology**

**College of Natural Sciences and Mathematics**

**BIOL 103 General Biology I** 3c-2l-4cr

**Prerequisite:** Non-BIOL majors only

A basic introduction to ecology, biochemistry, and cell biology, genetics, and evolution.

**BIOL 104 General Biology II** 3c-2l-4cr

**Prerequisites:** BIOL 103, non-BIOL majors only

A basic introduction to plant and animal physiology, neurobiology, animal behavior, and plant and animal reproduction and development.

**BIOL 105 Cell Biology** 3c-0l-3cr

**Prerequisite:** Non-BIOL majors only

Introduces concepts and applications for understanding human biological function from the point of view of cellular biology.

**BIOL 111 Principles of Biology I** 3c-3l-4cr

**Prerequisite:** Must be taken after or concurrent with CHEM 111

Introduces principles of biology, specifically in the topics of cell structure and function, genetics, and physiology. Develops skills in the use of the scientific method. For Biology majors.

**BIOL 112 Principles of Biology II** 3c-3l-4cr

**Prerequisite:** BIOL 111

Introduces the principles of biology, specifically in the topics of reproduction, development, evolution, ecology, and animal behavior. Develops skill in the use of the scientific method. For Biology majors.

**BIOL 113 Genetics in Modern Society** 3c-0l-3cr

**Prerequisite:** Non-BIOL majors and non-BIOL minors only

Intended primarily to provide the student with an appreciation and comprehension of the field of genetics as it applies to the human condition. Introduces the topic of human heredity as a means to understand genetic disorders, genetic therapies, and alternative reproductive strategies. Pro-



vides an introductory background of the field of genetics and current biotechnology related to genetics, which is suitable for nonmajors. Using this background, the student is presented with the most recent events in the field of human genetics and its effect on society.

**BIOL 114 Environmental Science** 3c-01-3cr

**Prerequisite:** Non-BIOL majors only

An introduction to environmental science with an emphasis on human impacts. Uses an interdisciplinary approach to the consideration of population growth, pollution, preservation of species, and establishment of public policy. Students learn basic principles in ecology as the basis for understanding problems of the environment.

**BIOL 115 Biotic Diversity of North America** 3c-01-3cr

**Prerequisite:** Non-BIOL majors and non-BIOL minors only

An introduction to the biological diversity of North America from Barrow, Alaska, to Tehuantepec, Mexico. All major aquatic and terrestrial biomes occurring in North America are examined with regard to plant forms, animal composition, and environmental (abiotic) conditions.

**BIOL 116 Introduction to Marine Biology** 3c-01-3cr

**Prerequisite:** Non-BIOL and non-BIED majors and non-BIOL minors only

An introduction to the world of marine biology. Includes a discussion of the major groups of plants and animals found in the marine environment and a discussion of the major communities that make up the oceans of the world.

**BIOL 117 Understanding HIV Biology and AIDS** 3c-01-3cr

An introduction to the AIDS virus in which the mode of infection, transmission, and prevention are used as an illustration of biological principles. Profiles biological indicators for HIV disease and its progression to AIDS. Therapeutic and nontherapeutic approaches to treat HIV infections are emphasized.

**BIOL 118 The History of Pain** 3c-01-3cr

**Prerequisite:** Non-BIOL and non-BIED majors, and non-BIOL minors only

Despite its many individual, social, and cultural characteristics, pain is based on an anatomical and physiological foundation. Looks at the history of scientific theories and hypotheses about understanding the pain mechanism. Through this type of study, students learn about the status of pain in various societies throughout the ages.

**BIOL 119 Emerging Diseases** 3c-01-3cr

**Prerequisite:** Non-BIOL majors and non-BIOL minors only

Intended primarily to provide an understanding of the biological basis of infectious diseases and the social, historical, and ethical consequences of these types of afflictions. Covers background material such as the germ theory of disease and the cell theory at an introductory level. Includes specific cases of emerging or reemerging infectious diseases with emphasis on current events relating to disease outbreaks.

**BIOL 123 Perspectives in Cell and Molecular Biology** 1c-01-1cr

**Prerequisite:** BIOL 111

For those interested in entering the Cell and Molecular Biology Track. Introduces the latest advances in the fields of molecular biology and biotechnology, as well as the career possibilities and professional responsibilities in these fields. Aids students in clarifying career goals and introduces them to the literature of molecular biology, including electronic resources. Includes field trips that might take place on weekends.

**BIOL 150 Human Anatomy** 2c-31-3cr

**Prerequisite:** Non-BIOL majors only

A study of the functional systematic anatomy of the human. Lab studies center on nonhuman mammals whose anatomy is then related to the human condition.

**BIOL 151 Human Physiology** 3c-21-4cr

**Prerequisites:** BIOL 103, or 105, 111, or HPED 221, or instructor permission. Non-BIOL majors and controlled elective for BIOL majors

The study of the mechanisms but with the human organism functions. Mechanisms covered range from the molecular/subcellular to the tissue, organ, and organism levels. Organ systems examined include the nervous,

muscular, cardiovascular, respiratory, endocrine, renal, digestive, and reproductive. Emphasizes three major themes: 1) that organ functions are dependent upon the underlying molecular and cellular processes, 2) that all organ systems utilize biological control systems to maintain organ homeostasis, and 3) that each organ function is closely controlled and dependent upon the interaction/integration with functions from other organ systems.

**BIOL 155 Human Physiology and Anatomy** 3c-31-4cr

**Prerequisite:** Non-BIOL majors only (FDNT, DIET, FCSE, HPED, and SAFE majors)

A study of structure and function of the human body. Emphasizes normal function, with particular attention to functional anatomy, control mechanisms, and interrelationships among systems. Laboratory studies include experimentation and dissection. For students with little or no science background.

**BIOL 210 Botany** 2c-31-3cr

**Prerequisites:** BIOL 111-112 or instructor permission

A survey of the major plant groups, their physiology, structure, life cycles, evolution and ecology, and economic roles of plants. Combined lecture-laboratory.

**BIOL 220 General Zoology** 2c-31-3cr

**Prerequisites:** BIOL 111-112 or instructor permission

An examination of the evolution, form, and function of all major animal phyla, from sponges through chordates. Interactive lecture-laboratory sessions follow a phylogenetic approach to the Animal Kingdom and incorporate essentials of animal ecology, physiology, functional morphology, and behavior.

**BIOL 221 Environmental Health and Protection** 3c-31-4cr

**Prerequisites:** BIOL 104 or 112; CHEM 102 or 112 or 114

A survey of indoor and outdoor environmental health hazards. Hazards are addressed from the standpoint of their source and nature, human health effects, measurement and control, and management.

**BIOL 241 General Microbiology** 2c-31-3cr

**Prerequisites:** Non-BIOL majors only (NURS, and RESP majors), BIOL 105, CHEM 101, or equivalent

A study of microorganisms and the role they play in water, soil, food, and infection. Microbes and disease are emphasized. Standard methods and techniques are emphasized in laboratory.

**BIOL 242 Comparative Vertebrate Anatomy** 2c-31-3cr

**Prerequisites:** BIOL 220

An investigation of the comparative structure and function of the vertebrate body emphasizing the diverse solutions to the problem of design for survival and the evolutionary mechanisms that provide those solutions. Meets twice per week for two and one-half hours. Each meeting includes both lecture and laboratory experiences.

**BIOL 250 Principles of Microbiology** 2c-31-3cr

**Prerequisites:** BIOL 111-112 or instructor permission

A study of the structure, nutrition, and biochemical activities of microbes. A survey of viruses, blue-green bacteria, bacteria, algae, fungi, and protozoa and their diversity in natural environments. For BIOL and BIED majors.

**BIOL 251 Field Botany** 2c-31-3cr

**Prerequisite:** BIOL 210

The collection, preservation, identification, and distribution of selected herbaceous and woody plants of Western Pennsylvania. Emphasizes taxonomic principles, the use of keys and manuals, and the recognition of local flora.

**BIOL 252 Field Zoology** 2c-31-3cr

**Prerequisite:** BIOL 220

Field natural history of vertebrates; identification, collection, and preservation techniques.

**BIOL 261 Ornithology** 2c-31-3cr

**Prerequisites:** BIOL 111-112 or BIOL 103-104

A study of birds of the region. Indoor laboratory as well as early morning and possibly weekend field trips required.

<b>BIOL 262 General Entomology</b>	<b>2c-3l-3cr</b>	are discussed. Lab stresses methods of isolation and identification of pathogens.
<b>Prerequisite:</b> BIOL 220		
Morphology, anatomy, ecology, taxonomy, and economic and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required.		
<b>BIOL 263 Genetics</b>	<b>2c-3l-3cr</b>	<b>BIOL 364 Immunology</b> <b>2c-3l-3cr</b>
<b>Prerequisite:</b> BIOL 111		<b>Prerequisites:</b> BIOL 250, CHEM 232, or instructor permission
Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics.		Physical and chemical properties of antigens and antibodies; nature of antigen-antibody interactions; mechanism of antibody formation; and immune reaction and disease. Lab employs serological techniques.
<b>BIOL 270 Food Protection and Safety</b>	<b>2c-3l-3cr</b>	<b>BIOL 401 Laboratory Methods in Biology and Biotechnology</b> <b>2c-4l-3cr</b>
<b>Prerequisites:</b> BIOL 103 or 105 or 111; CHEM 101 and 102 or CHEM 111 or 112; or instructor permission		<b>Prerequisite:</b> CHEM 351 or BIOC 301
Provides an understanding of factors that influence the safety and wholesomeness of food from farm to table. Examines food sanitation and consumer protection standards. Not for Biology (except for Environmental Health Track), Biochemistry, or Natural Science majors.		Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology. (Also offered as BIOC 401; may not be taken for duplicate credit)
<b>BIOL 271 Evolution</b>	<b>3c-0l-3cr</b>	<b>BIOL 405 Biology of the Cell</b> <b>2c-3l-3cr</b>
<b>Prerequisites:</b> BIOL 111-112 or 103-104, 263		<b>Prerequisites:</b> BIOL 111, CHEM 231, or instructor permission
Historical development of evolutionary thought; evidence and operational mechanisms involved; origin and phylogenetic relationships of biological groups.		Introduces the cellular and modular mechanisms by which individual cells grow, receive and respond to internal and external signals, and move. Discusses the latest advances in the discipline; students are expected to utilize current literature on their own as a means of building critical thinking skills. The student-centered laboratory portion emphasizes individual and group activities.
<b>BIOL 272 Conservation of Plant and Animal Resources</b>	<b>2c-3l-3cr</b>	<b>BIOL 410 Molecular Biology Topics</b> <b>3c-0l-3cr</b>
<b>Prerequisites:</b> BIOL 111-112 or 103-104		<b>Prerequisite:</b> BIOL 263 or BIOC 301 or CHEM 351
A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips.		Involves the study of biological phenomena in molecular terms. Focuses on recombinant DNA principles as they relate to prokaryotes and eukaryotes. Emphasizes the modern methods used in recombinant DNA technology.
<b>BIOL 281 Special Topics</b>	<b>var-1-3cr</b>	<b>BIOL 450 Pymatuning: Field Studies</b> <b>var-3cr</b>
<b>Prerequisite:</b> As appropriate to course content		During the summer session, various field courses are offered through the Pymatuning Laboratory of Ecology. The offerings vary depending on the summer. Possible offerings include Experimental Design, Fish Ecology, Behavioral Ecology, Aquatic Botany, and Ecological Genetics. Information regarding specific offerings is available from the department in the spring.
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.		<b>BIOL 453 Plant Physiology</b> <b>2c-3l-3cr</b>
<b>BIOL 310 Applied Entomology and Zoonoses</b>	<b>2c-3l-3cr</b>	<b>Prerequisites:</b> BIOL 210, CHEM 231
<b>Prerequisite:</b> BIOL 220 or permission		Studies physiological processes occurring in plants considered in relation to growth, development, and ecology of plants.
A study of the measures for abatement or control of arthropods, rodents, birds, and other disease vectors of public importance; selection, chemistry, formulation, and safe application of insecticides, rodenticides, and fumigants; pesticing equipment; application of biological and other measures of control.		<b>BIOL 455 Animal Behavior</b> <b>3c-0l-3cr</b>
<b>BIOL 323 Introduction to Toxicology and Risk Assessment</b>	<b>3c-0l-3cr</b>	<b>Prerequisite:</b> BIOL 220 or permission
<b>Prerequisites:</b> BIOL 104 or 112, CHEM 102 or 112; or permission		The biological study of animal behavior. Topics include the mechanisms, development, ecology, and evolution of behavior.
A study of uptake, distribution, metabolism, and excretion of environmental chemicals; mechanisms of their toxicity; and their effects on major organ systems. Knowledge of these topics is applied to risk assessment procedures.		<b>BIOL 456 Ecological Toxicology</b> <b>2c-3l-3cr</b>
<b>BIOL 331 Animal Developmental Biology</b>	<b>2c-3l-3cr</b>	<b>Prerequisites:</b> BIOL 112, CHEM 112
<b>Prerequisite:</b> BIOL 220 or permission		A study of the impact of chemical pollutants and other stresses on non-human biological systems from the subcellular to ecosystem levels. An ecological risk assessment is conducted in the field and laboratory settings.
Comparative and molecular development of vertebrate animals are the major considerations. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.		<b>BIOL 460 Fundamentals of Environmental Epidemiology</b> <b>3c-0l-3cr</b>
<b>BIOL 352 Comparative Animal Physiology</b>	<b>2c-3l-3cr</b>	<b>Prerequisites:</b> BIOL 104 or 112; MATH 216 or 217; or instructor permission
<b>Prerequisites:</b> BIOL 220, CHEM 231		A study of the health consequences of involuntary exposure to harmful chemical and biological agents in the general environment. Disease etiology, occurrence, and intervention in human populations are examined through epidemiologic study using analytical methods and applications.
A comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.		<b>BIOL 463 Limnology</b> <b>2c-3l-3cr</b>
<b>BIOL 362 Ecology</b>	<b>2c-3l-3cr</b>	<b>Prerequisite:</b> BIOL 362
<b>Prerequisites:</b> BIOL 111-112, BIOL 210 or 220		An investigation into the physical, chemical, and biological aspects of inland waters and their interrelationships. In the laboratory the student gains experience in the techniques involved in aquatic sampling and the analysis of data. (Saturday or Sunday labs may be required.)
A study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.		<b>BIOL 466 Principles of Virology</b> <b>3c-0l-3cr</b>
<b>BIOL 363 Medical Microbiology</b>	<b>2c-3l-3cr</b>	<b>Prerequisite:</b> BIOL 263 or equivalent course in Genetics, or CHEM 351 or equivalent course in BIOC, or instructor permission
<b>Prerequisite:</b> BIOL 250 or instructor permission		
A study of disease caused by microorganisms with an emphasis on human pathogens. Both epidemiology and aspects of host-parasite relationships		

Topics include structure, classification, assay, and transmission of viruses; methods used in the study of viruses; viral replication, gene expression, and gene regulation; host-viral interactions and subviral pathogens.

**BIOL 471 Dendrology of the Eastern U.S.** 2c-3l-3cr

**Prerequisite:** BIOL 210 or instructor permission

A comprehensive survey of the tree species in the eastern portion of North America with an emphasis on Pennsylvania forests.

**BIOL 473 Seedless Vascular Plants: Ferns and Allied Flora** 2c-3l-3cr

**Prerequisite:** BIOL 210

A comprehensive survey of morphological and habitat characteristics of seedless vascular plants (generally ferns and their allies) of Pennsylvania and the surrounding states.

**BIOL 474 Spring Flora of the Northeastern U.S.** 2c-3l-3cr

**Prerequisite:** BIOL 210 or instructor permission

A comprehensive survey of the emerging flora in the northeastern portion of North America (with an emphasis on the herbaceous plants of Pennsylvania).

**BIOL 475 Mammalogy** 2c-3l-3cr

**Prerequisite:** BIOL 220

A general discussion of mammals emphasizing systematics, distribution, and structural and functional modifications related to evolution of this group. Lab work samples numerous techniques that can be applied to mammalian biology.

**BIOL 476 Parasitology** 2c-3l-3cr

**Prerequisite:** BIOL 220

Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa and flatworm and roundworm species of man. Dissection of hosts for parasites.

**BIOL 477 Neurobiology** 3c-0l-3cr

**Prerequisites:** BIOL 111 or 105, or 151, or PSYC 350 or instructor permission

Presents the underlying mechanisms through which the nervous system mediates behavior, from the molecular to the organismal level. Emphasizes two major themes: 1) the roles of synapses and neuronal excitability in shaping the input/output functions of neurons and neuronal networks and 2) the role of neuronal development and neuronal experience upon resultant neuronal organization.

**BIOL 480 Biology Seminar** 1c-0l-1cr

A discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

**BIOL 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Course varies from semester to semester covering diverse topics in specific areas of biology.

**BIOL 482 Independent Study** var-1-3cr

**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office. A 2.5 cumulative GPA and in major courses is required.

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a faculty member but does not involve regular class or laboratory hours.

**BIOL 483 Honors Thesis/Independent Study** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**BIOL 484 Honors Seminar** 2c-0l-2cr

**Prerequisite:** Admission to the Biology Honors Program

Selected topics in biology. Use of the literature in preparation for advanced coursework and BIOL 483. Analyzes the literature, develops a literature review, and develops a thesis proposal. Guest speakers provide additional exposure to major areas of biology.

**BIOL 490 Field Studies in Biology** var-var-1-4cr

**Prerequisites:** Specific prerequisites, as are appropriate to the course, will be set by individual instructors, instructor permission

Various specialized field courses instructed by biologists from IUP. Explores the rich diversity and ecology of the flora and fauna that inhabit specialized regions of Pennsylvania, the United States, or other countries. Emphasizes ecology, behavior, and natural history of organisms in their natural surroundings. Must meet travel and living expenses. May be taken more than once for credit and grade if course content is different.

**BIOL 491 Problems in Biology** 1-3 cr

The student may independently investigate any field of biology in which he or she is interested. This work is supervised by a faculty member but does not involve regular class or laboratory hours. The student should expect to spend three hours per week for each credit earned.

**BIOL 493 Biology Internship** var-3-12cr

**Prerequisites:** BIOL major with at least 60cr, 2.5 cumulative GPA, and permission of the director of internships and the chairperson

Selected students have opportunity, under department supervision, to gain off-campus practical experience in area of interest. Only 6cr may be applied toward major; total number of credits is decided in consultation involving student, his/her advisor, and director of internships.

**BIOL 499 Research Biology** 3cr

Acquaints the undergraduate student with the techniques of modern research by actively engaging in a program of biological experimentation and/or research. Students work in close harmony with the faculty member(s) engaged in an active research project. There are no formal lectures or laboratories, and a broad biological background is required. Enrollment is by permission only.

**BLAW: Business Law**

**Department of Finance and Legal Studies**

**Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**BLAW 235 Legal Environment of Business** 3c-0l-3cr

Explores the current American legal system by providing an introduction to a variety of legal topics important to all individuals and businesses. Topics must include sources of law, the court system and basic procedures, tort law, criminal law, and contracts. Topics may also include legal research and intellectual property. Ethical issues and international law are integrated throughout.

**BLAW 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BLAW 336 Law of Business Organizations** 3c-0l-3cr

**Prerequisite:** BLAW 235

A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

**BLAW 337 Consumer Law** 3c-0l-3cr

The nature of law as it pertains to the consumer. Attention to consumer protection relationships; real and personal property; credit; environmental law; law pertaining to employment; landlord-tenant relationships; product liability; insurance; and family law.

**BLAW 440 Business Negotiations** 3c-01-3cr  
**Prerequisites:** BLAW 235, junior standing  
Open to all majors meeting the prerequisites. Covers the basic theories and strategies of negotiation in the business environment and provides instruction and practice to develop negotiation skills. Focuses on the knowledge and skills needed in intercompany and intracompany negotiations. Focuses on neither collective bargaining nor labor negotiations.

**BLAW 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**BLAW 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**BTED: Business and Technology Education**  
**Department of Technology Support and Training**  
**Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**BTED 101 Computer Literacy** 3c-01-3cr  
An introductory course providing a fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. Emphasizes the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management, presentation graphics, web browsers, search strategies, and e-mail), and the social and ethical aspects of the impact of computers on society. *Note:* cross-listed as COSC/IFMG 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**BTED 132 Computer Keyboarding and Formatting** 3c-01-3cr  
**Prerequisite:** BTED 309 or successful completion of proficiency exam  
Focuses on the development of correct techniques in keyboarding. Emphasizes proofreading, formatting tabulations, business letters, business reports, business forms, rough drafts, and manuscripts; an additional emphasis on production, accuracy, and speed.

**BTED 201 Internet and Multimedia** 3c-01-3cr  
**Prerequisite:** BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail  
Focuses on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. An information literacy course for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**BTED 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BTED 293 Practicum: Computer and Information Technology (CIT)** 3c-01-3cr  
**Prerequisites:** Completion of 45cr, to include all specialty and business core courses of the CIT major; 2.5 cumulative GPA, 2.75 GPA in the CIT program; and approvals of the CIT practicum coordinator, department chair, and academic dean  
A culminating experience for CIT majors. A supervised work experience with an approved agency (business, industry, or government), that combines classroom theories and skills with job-related experiences. The student works cooperatively with the CIT practicum coordinator and business agency representative to identify the appropriate work site and job responsibilities. A journal of experiences, periodic written reports, and a final report are the expected product.

**BTED 309 Keyboarding for Educators** 1c-01-1cr  
**Corequisite:** BTED 412  
Provides Business Education students with the fundamental skills to keyboard information quickly and accurately. Introduces the basic pedagogy of keyboarding in a K-12 classroom. Techniques of basic formatting, speed, and accuracy building are also covered. Open to BTED majors only.

**BTED 411 Methods in Business and Information Technology I** 3c-01-3cr  
**Prerequisites:** EDSP 102, PSYC 101, and completion of the freshman and sophomore courses in the student's major areas  
Includes instruction in the general methods of teaching and evaluating business courses. A major emphasis is on the planning for instruction. Creative techniques and procedures for effectively teaching and managing the classroom are evaluated. Opportunities are provided to incorporate appropriate content and materials to allow for students with special learning needs. Current issues in vocational education such as advisory committees, adult education, and federal legislation are included. (Offered as BTED 311 prior to 2010-2011)

**BTED 412 Methods in Business and Information Technology II** 3c-01-3cr  
**Prerequisite:** BTED 411  
Includes instruction in the methods of teaching and evaluating both the technology-oriented and cognitive-related courses in business education. An emphasis is placed on planning instruction, developing methods and strategies for making effective classroom presentations, delivering instruction, and managing the classroom. Opportunities are provided to undertake the responsibilities assigned to the business classroom teacher incorporating appropriate content and materials to allow for students with special learning needs. Further, the prospective teacher is given opportunities to assume the teaching role competencies and research current trends in the field. (Offered as BTED 312 prior to 2010-2011)

**BTED 470 Technology Applications for Education** 3c-01-3cr  
Provides a prospective business educator with concepts, applications, and methodologies needed to be effective in today's classroom, including advanced web page coding, advanced computer applications, creation of an inquiry-oriented activity in which the information that learners interact with comes from Internet resources, and a learned society's rules for records management. Also includes instruction in the pedagogy of computer applications. The end product will be additions to students' e-portfolios as well as their work sample. (Offered as BTED 370 prior to 2009-2010)

**BTED 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**BTED 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**BTST: Business Technology Support and Training**  
**Department of Technology Support and Training**  
**Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**BTST 105 Introduction to Business** 3c-01-3cr

An introduction to business, emphasizing critical issues impacting the business world, such as globalization, technology, ethics, and diversity. An overview of the various functional areas of business and provides an understanding of the need for integration of those functional areas for success in business. Stresses experiential learning, develops team building skills, strengthens oral and written communication skills, and provides for personal interaction with university faculty. An introduction to career opportunities and curriculum choices in business.

**BTST 221 Business Technical Writing** 3c-01-3cr

**Prerequisite:** ENGL 101

The application of business and technical writing styles, letters, memos, reports, procedures, and manuals are some areas of concern. Emphasizes clear, concise writing style. (May not be used as a substitute for BTST 321)

**BTST 231 Speech Communication for Professionals** 1c-01-1cr

A study of theory and principles of effective oral presentations in a professional setting. Content includes audience analysis, management of speech anxiety, topic selection and refinement, proper selection and use of visual aids, and speech forms. Builds professional presentation skills as course assignments to develop, critique, and deliver professional presentations are fulfilled.

**BTST 273 Hardware Support Solutions** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101

Emphasizes systems hardware, especially the microcomputer. Concepts and design principles common to all microprocessors are studied. Auxiliary hardware such as printers, modems, scanners, and laser technology are included. Basic network technology concepts and peer-to-peer network configuration, maintenance, and troubleshooting are also included.

**BTST 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**BTST 310 Telecommunications** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101

An introduction to telecommunications in the business environment. Includes an overview of electronic communication systems including a conceptual framework as well as hands-on experience. Concepts of telecommunications technology, applications, and management as they apply to business and industry are addressed.

**BTST 321 Business and Interpersonal Communications** 3c-01-3cr

**Prerequisites:** ENGL 101, 202

A study of communication theory and principles as applied to business situations and practices; development of communication skills in areas of communication such as speaking, writing, listening, and nonverbal communicating. Emphasizes building effective interpersonal relations in a business environment.

**BTST 342 Intercultural Business Communication** 3c-01-3cr

**Prerequisite:** Junior standing

An in-depth study and theoretical understanding of intercultural business communication, including international, national, ethnic, racial, and socio-economic cultures. Explores practices, trends, and difficulties of people primarily identified with one culture's attempting to interact with people of another culture through speaking, listening, writing, and nonverbal means. Problems of intercultural communication situations for business are pin-

pointed, elements of the problems clarified, and guidelines projected for problem mitigation.

**BTST 383 Microcomputer Software Solutions** 3c-01-3cr

**Prerequisite:** BTST 273 or instructor permission

An in-depth study of all the salient functions and features of selecting, installing, configuring, and maintaining the microcomputer operating systems and resolving conflicts. Also develops skills for installing, customizing, and optimizing a variety of application, multimedia, Internet, and utility software programs, as well as configuring, managing, and troubleshooting PC security issues.

**BTST 401 Web Design** 3c-01-3cr

Focuses on web design research and experimentation with basic to leading-edge design techniques enabling the creation of user-focused websites. Emphasizes web design techniques resulting in fast-loading and well-placed graphics, cohesive color and typography across platforms and browsers, clear navigational interface, and appropriate use of sound, animation, and video. A variety of software production programs is introduced and used.

**BTST 402 Website Development and Administration** 3c-01-3cr

Guides through a hands-on, step-by-step process of creating a well-designed website for an enterprise. Teaches how to install and configure a WWW server, publish web pages using the latest tools, and set up mechanisms to manage and update a website and content.

**BTST 411 Technology Support Development** 3c-01-3cr

**Prerequisites:** BTST 273, 383, and COSC/IFMG 352

**Corequisite:** BTST 413

Includes dimensions of study relative to a technical support center—facilities management, workplace ergonomics, end-user needs assessment, and end-user support. Incorporates practical applications for building customer care, technical, and reporting skills through the development of various projects, including needs analysis, computer documentation, ergonomic facility design, and project management.

**BTST 413 Enterprise Technology Support** 3c-01-3cr

**Prerequisites:** BTST 273, 383, COSC/IFMG 352 or instructor permission

**Corequisite:** BTST 411

Provides a comprehensive and practical knowledge of enterprisewide technology. Topics include knowledge management, remote user support, teleconferencing, and network management and enhancement. Hands-on experience working with software, customizing user environments, managing technology security, and enhancing and troubleshooting the computing environment.

**BTST 442 Training Methods in Business and Information Technology Support** 3c-01-3cr

**Prerequisites:** PSYC 101, junior standing

Includes the application of theories of adult learning to planning, delivering, and evaluating training for education and information technology. Major emphasis is on the planning of instruction. Topics include needs assessment, live and mediated instruction, classroom management, evaluation and follow-up methods, and evaluation of training strategies. (Offered as BTST 311 prior to 2010-11)

**BTST 480 Seminar in Business Technology Support** 3c-01-3cr

**Prerequisite:** Graduating seniors only or instructor permission

Emphasizes solving of office management problems. Provides an opportunity to integrate and apply the skills and knowledge previously gained in the BTST major.

**BTST 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**BTST 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**BTST 493 Internship** var-3-6cr

**Prerequisites:** Approval of internship coordinator, chairperson, and dean and 2.75 cumulative GPA and 3.0 GPA in Business

A supervised office experience program with an approved agency (business, industry, and government).

**CDFR: Child Development and Family Relations**  
**Department of Human Development and Environmental Studies**  
**College of Health and Human Services**

**CDFR 218 Child Development** 3c-01-3cr

**Prerequisite:** Grade of C or better in PSYC 101

A survey of basic theories and research findings in child development. Covers consideration of theories and research findings on many stages of human development. Topics include physical, cognitive, and social/emotional development and the development of self-understanding, language development, and moral development.

**CDFR 224 Marriage and Family Relations** 3c-01-3cr

**Prerequisite:** PSYC 101

Provides a developmental and interactional approach to understanding family studies and to aid in understanding family life, with a primary emphasis on contemporary American families. Relevant theoretical perspectives of how families operate will be discussed. Areas covered include trends in family structures and functions in the U.S.; impact of media on marriage and family relationships; conducting research in family studies; diversity among U.S. families; gender roles in dating and marital relationships; communication and conflict resolution; human sexuality; dating and singlehood; combining work and family roles; parenting; effects of race and class on families; domestic violence; and divorce and remarriage.

**CDFR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CDFR 310 Child Observation and Assessment** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 218 and enrolled in minor or major or instructor permission

A study of two important aspects of child development as a course of study: observational assessment and theory. Observational assessment methods are taught and mastered by the students. Relevant theories of child development are discussed. Students integrate their observational assessment experience with the child development theories via a case study project.

**CDFR 315 Introduction to Early Intervention** 3c-01-3cr

**Prerequisites:** Grade of C or better in CDFR 218, 224, 310

Focuses on early intervention policies and laws that relate to services for children who are birth to school-age, including the Individualized Family Service Plan (IFSP) and the Individualized Education Plan (IEP) process. Special emphasis will be placed on ways to assist families in their roles as team members in the early intervention process, taking social, linguistic, economic, and cultural diversity into consideration. Provides practical information needed when working in early intervention settings.

**CDFR 321 Preschool Education: Play and Developmentally Appropriate Practices** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 218

Emphasizes play as a developmental process, as the primary vehicle for early learning, and as the major aspect of the preschool curriculum. Utilizes the child development philosophy as the basis for early learning environments. Provides students with knowledge to implement developmentally appropriate curriculum and methods for preschool education programming.

**CDFR 322 Early Care and Education** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 218 and previous 200- and 300-level CDFR courses

Introduces the historical background of the fields of child care and early childhood education and current educational issues and theories impacting the field. Includes curricula models, frameworks for curricula, research on the impact of early childhood experience, and diversity and inclusion issues.

**CDFR 323 Family Issues** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 224

A concentrated study of selected areas of family life, with emphasis on current personal and social issues affecting the family.

**CDFR 410 Infant and Toddler Development** 3c-01-3cr

**Prerequisites:** Grade of C or better in CDFR 218, 310, 315, 321; compliance with current agency regulations; and enrolled in major or instructor permission

A study of characteristic developmental changes of human infants and toddlers from birth to approximately 36 months. Participation as teacher assistant in the infant/toddler childcare center provides experience in developmentally appropriate guidance and programming for very young children.

**CDFR 411 Family and Community** 3c-01-3cr

**Prerequisites:** Grade of C or better in CDFR 218, 224, 310, 315, 323; compliance with current agency regulation and enrolled in major/minor or instructor permission

A study of community agencies and their service to families. Covers advocating for children and families; identifying community agencies that aid families in need; examining the professional code of ethics and ethical decision making; and recognizing signs of trouble within families and referring them appropriately. Community service and agency speakers will be integrated into coursework. Participation in a community service project is a mandatory part of the course. Completion of this course with a C grade or better is required for graduation. (Offered as CDFR 463 prior to 2011-12)

**CDFR 425 Adolescence: Risk and Resiliency** 3c-01-3cr

**Prerequisites:** Grade of C or better in CDFR 218 and 224

Focuses on growth and development of pre-adolescents and adolescents, parenting of adolescents, and adolescents as parents. Special emphasis is given to identifying risk and resiliency factors when working with adolescents and families in the field of human services. A variety of human development theories are examined in an attempt to understand the adolescent from both an individual and a societal point of view. (Offered as CDFR 325 prior to 2011-12)

**CDFR 426 Techniques of Parent Education** 3c-01-3cr

**Prerequisite:** Grade of C or better in 218, 224, 310, 315, 321, 322

An examination of the nature, extent, and significance of parent education and parent involvement. Students become knowledgeable of the diverse and complex characteristics and needs of families. Enables students to identify the interrelationships of home, school, and community agencies to enhance collaboration and cooperation. Students identify methods, programs, and curricula to increase communication with parents and families.

**CDFR 427 Administration of Child Development Centers** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 218, 310, 315, 321, 322

Development of special knowledge and competencies needed by successful administrators of child care programs, including proposal writing, budgeting and management, staff selection and training, appropriate curriculum material and philosophy, parent involvement, child advocacy, and program evaluation.

**CDFR 428 Family Dynamics** 3c-01-3cr

**Prerequisite:** Grade of C or better in CDFR 224, 310, 323; and enrolled in major or instructor permission

Emphasizes processes and models of family development topics, including an understanding of the development and maintenance of interpersonal relationships with an emphasis on how the theoretical frameworks of family studies can aid in this understanding. Focuses on approaches and dynamics of principles related to familial and marital adjustment and coping, with

an emphasis on understanding the strengths and weaknesses of families and how family members relate to each other.

**CDFR 429 Teaching in Child Development Centers** 2c-4I-4cr

**Prerequisites:** Grade of C or better in CDFR 218, 310, 315, 321, 322, 323, 410, 426; compliance with current agency regulations; and enrolled in major or instructor permission

Participation in a laboratory child development/early care and education center as a teacher's assistant. Applying principles and concepts of child development is the major focus. Techniques of planning developmentally appropriate activities and utilizing positive guidance with a group of diverse preschool children are emphasized.

**CDFR 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CDFR 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3cr. Approval is based on academic appropriateness and availability of resources.

**CDFR 493 Internship** 0c-6 to 12I-6-12cr

**Prerequisites:** Permission of CDFS Program, HDES department, and college dean; earned at least 75cr; minimum GPA of 2.5 in major; compliance with current agency regulations; and enrolled in major

Practical field experience related to the student's major area of study. Specific objectives are developed individually in consultation with the internship coordinator and/or university faculty member who supervises the internship. Logs and major paper required. May be taken for 6 to 12 credits.

**CHEM: Chemistry**

**Department of Chemistry**

**College of Natural Sciences and Mathematics**

**CHEM 101 College Chemistry I** 3c-2I-4cr

Basic principles and concepts of inorganic chemistry are developed from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion illustrates physical and chemical properties in a qualitative and quantitative manner. Restricted to students enrolled in the colleges of Health and Human Services and Natural Sciences and Mathematics; others by permission. Some lecture and lab sections may be restricted to Nursing, Respiratory Care, Respiratory Therapist, and Nuclear Medicine Technology majors. Some lab sections may be restricted to Nutrition and Dietetics majors.

**CHEM 102 College Chemistry II** 3c-2I-4cr

**Prerequisite:** CHEM 101

Basic, fundamental principles and concepts of organic and biochemistry are developed. Deals primarily with structural features of organic compounds, the chemistry of functional groups, and practical examples and uses of organic compounds. The laboratory portion illustrates properties and reactions of representative organic compounds. Restricted to students enrolled in the colleges of Health and Human Services and Natural Sciences and Mathematics; others by permission. Some lecture and lab sections may be restricted to Nursing, Respiratory Care, Respiratory Therapist, and Nuclear Medicine Technology majors. Some lab sections may be restricted to Nutrition and Dietetics majors.

**CHEM 105 The Forensic Chemistry of CSI** 3c-0I-3cr

For students who would like to learn about forensic chemistry and the basic science needed to understand it. Chemical concepts on the level of an introductory chemistry course and their applications to forensic science are explored in detail. Topics include the forensic analysis of drugs, fibers, glass, fingerprints, arson, questioned documents, and other types of physical evidence. Other topics include how forensic science is portrayed in novels,

movies, computer games, and TV and the methods used in forensic evidence collection at a crime scene. Course cannot be used to fulfill the requirements for a CHEM major or minor.

**CHEM 111 General Chemistry I** 3c-3I-4cr

A lecture-discussion of principles of chemistry, including theory and applications. The lab illustrates principles discussed. Topics include scientific measurements, simple definitions and concepts, the mole, stoichiometry, gas laws, electronic structure of the atom, bonding thermochemistry, and descriptive chemistry of the elements. Restricted to students enrolled in the colleges of Education and Educational Technology, Health and Human Services, and Natural Sciences and Mathematics; others by permission.

**CHEM 112 General Chemistry II** 3c-3I-4cr

**Prerequisite:** CHEM 111 or 113

A continuation of General Chemistry I. Topics discussed include the solid and liquid state, solutions, kinetics, equilibria, acids and bases, solubility equilibria, thermodynamics, electrochemistry, and descriptive chemistry of the elements. Restricted to students enrolled in the colleges of Education and Educational Technology, Health and Human Services, and Natural Sciences and Mathematics; others by permission.

**CHEM 113 Concepts in Chemistry I** 3c-3I-4cr

An introductory course for CHEM, CHED, BIOC, GEOL, and SDR majors. The first half of a two-semester sequence designed to give students the foundation of knowledge and laboratory techniques required to successfully complete a Chemistry degree program. Topics include atomic theory, an introduction to chemical reactions, stoichiometry, thermo-chemistry, chemical bonding, and molecular geometry, transition metal complexes, polymers, and biomolecules.

**CHEM 114 Concepts in Chemistry II** 3c-3I-4cr

**Prerequisite:** CHEM 111 or 113

An introductory course for CHEM, CHED, BIOC, GEOL, and SDR majors. The second half of a two-semester sequence designed to give students the foundation of knowledge and laboratory techniques required to successfully complete a Chemistry degree program. Topics include kinetic-molecular theory of gases, the liquid and solid states, solution theory, kinetics, equilibrium, thermodynamics, acids and bases, and electrochemistry.

**CHEM 214 Intermediate Inorganic Chemistry** 1c-3I-2cr

**Prerequisite:** CHEM 112 or 114

Presents the characteristic reactions and compounds of elements from across the periodic table. For the main-group elements, both discrete molecular compounds and nonmolecular materials are discussed. For the alkali and transition and inner-transition metals, the focus is on nonmolecular species such as ionic compounds, ceramics, superconductors, and other inorganic-based materials. Also presents the solid-state structure of inorganic-based materials. Uses laboratory activities to reinforce concepts presented in lecture and to stimulate interest through discovery-based exercises.

**CHEM 231 Organic Chemistry I** 3c-4I-4cr

**Prerequisite:** CHEM 112 or 114

A study of compounds of carbon, with a special emphasis on structure-reactivity relationships. Laboratory work emphasizes methods of separation and purification of organic compounds.

**CHEM 232 Organic Chemistry II** 3c-4I-4cr

**Prerequisite:** CHEM 231

A continuation of Organic Chemistry I with an introduction to spectroscopic techniques. Laboratory work emphasizes the synthesis of representative compounds.

**CHEM 255 Biochemistry and Nutrition** 3c-0I-3cr

**Prerequisite:** CHEM 102

For Nutrition and Dietetics majors. Studies chemistry and biological function of biologically active compounds with respect to nutritional requirements.

**CHEM 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CHEM 301 Introduction to Chemical Research** 1c-01-1cr  
**Prerequisite:** CHEM 231

A discussion of current technical literature and current research problems of faculty. Lectures by outside chemists and student presentations are included. Open to junior or senior CHEM, CHED, and BIOC majors; others by permission of the chairperson.

**CHEM 321 Quantitative Analysis** 3c-4l-4cr  
**Prerequisite:** CHEM 112 or 114

Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; a special emphasis on perfecting laboratory techniques and application of general chemical knowledge through problem solving.

**CHEM 322 Instrumental Analysis** 3c-4l-4cr  
**Prerequisite:** CHEM 341

Modern instrumental methods of chemical analysis. Teaches theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods.

**CHEM 323 Analytical Methods** 3c-4l-4cr  
**Prerequisite:** CHEM 112 or 114 and non-CHEM or non-CHED major

Principles of precipitation, acid-base, oxidation-reduction, and equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc.

**CHEM 331 Organic Molecular Structure Determination** 4c-var-3cr  
**Prerequisites:** CHEM 231-232 (CHEM 232 may be taken concurrently)

Gives the student experience in systematic identification of various classes of organic compounds by both chemical and physical methods.

**CHEM 335 Advanced Organic Chemistry** 3c-0l-3cr  
**Prerequisites:** CHEM 232 and 341

Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.

**CHEM 340 Physical Chemistry for the Biological Sciences** 3c-0l-3cr  
**Prerequisites:** MATH 122 or 225, and PHYS 112 or 132; CHEM 232

A one-semester course for BIOC and BIOL majors. Chemical thermodynamics, equilibria, kinetics; quantum mechanics; and spectroscopy especially as applied to biomechanical systems.

**CHEM 341 Physical Chemistry I** 4c-0l-4cr  
**Prerequisites:** MATH 122 or 225, and PHYS 112 or 132; CHEM 112 or 114

Chemical thermodynamics with applications to solutions, phase, and chemical equilibria-kinetic theory.

**CHEM 342 Physical Chemistry II** 3c-0l-3cr  
**Prerequisite:** CHEM 341

A study of solids, liquids, surfaces, chemical kinetics, electrochemistry, and atomic and molecular structure.

**CHEM 343 Physical Chemistry Laboratory I** 0c-3l-1cr  
**Prerequisites:** CHEM 321; must be taken after or concurrent with CHEM 341

Experiments illustrating application of fundamental laws to actual systems. (Writing-intensive course)

**CHEM 344 Physical Chemistry Laboratory II** 0c-3l-1cr  
**Prerequisites:** CHEM 343; must be taken after or concurrent with CHEM 342

An extension of CHEM 343; experiments related to chemical kinetics, molecular spectroscopy, and other topics of physical chemistry.

**CHEM 351 Biochemistry** 4c-0l-4cr  
**Prerequisite:** CHEM 231

A study of chemistry and biological functions of carbohydrates, lipids, proteins, minerals, vitamins, and hormones.

**CHEM 410 Advanced Inorganic Chemistry Laboratory** 0c-3l-1cr  
**Prerequisite:** CHEM 322

A laboratory course in which the techniques used in the synthesis and characterization of inorganic compounds are explored. Emphasizes the preparation of a wide variety of inorganic compounds and the methods by which they are identified and characterized.

**CHEM 411 Advanced Inorganic Chemistry** 3c-0l-3cr  
**Prerequisite:** CHEM 341

A study of advanced principles of inorganic chemistry including atomic structure, symmetry, advanced bonding theories, acids and bases, coordination chemistry, and organometallic chemistry.

**CHEM 412 Advanced Structural and Synthetic Methods in Inorganic Chemistry** 2c-2l-3cr  
**Prerequisites:** CHEM 411 and either CHEM 410 or 322

Advanced techniques used in the synthesis and characterization of inorganic compounds are explored. In lecture, an emphasis is on the theory and application of structural and spectroscopic methods of characterization. In lab, an emphasis is on advanced methods of synthesis and structural characterization using representative examples of important classes of inorganic compounds.

**CHEM 421 Advanced Instrumental Analysis** 4c-var-3cr  
**Prerequisite:** CHEM 322

A study of modern chemical analysis, using advanced instrumental techniques; emphasis is on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used.

**CHEM 441 Advanced Physical Chemistry** 3c-0l-3cr  
**Prerequisite or Corequisite:** CHEM 342

An introduction to spectroscopy and molecular structure.

**CHEM 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CHEM 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**CHEM 493 Internship in Chemistry** var-4-9cr  
**Prerequisites:** CHEM 111 or 113, CHEM 112 or 114, and CHEM 231, 232, 321, 341, junior status, and departmental approval

Full-time involvement in an actual "on-the-job" situation in an industrial or research laboratory under the tutelage of a selected preceptor. A department faculty member works closely with the student and preceptor and assumes responsibility for making the final evaluation and assigning a grade.

**CHEM 498 Problems in Chemistry** var-1-2cr  
**Prerequisite:** CHEM 231 and permission of chairperson

A supervised undergraduate research, in conjunction with a faculty member in the chemistry department.

**CHEM 499 Problems in Chemistry Education** var-1sh  
**Prerequisite:** CHED major; permission of chairperson

An independent study on selected problems in chemistry education, including library reading, lab work, and conferences with a chemistry education faculty member who is supervising the study.



**CHIN: Chinese**  
**Department of Foreign Languages**  
**College of Humanities and Social Sciences**

**CHIN 101 Elementary Chinese I** **3c-01-3cr**

For beginning students. Introduces the Chinese language, with attention focused on the four basic skills: reading, writing, speaking, and listening. Students learn pronunciation (including the four tones), fundamental grammatical patterns, and how to write approximately 250 characters. Also imparts knowledge of Chinese culture. Attendance and language lab practice are required.

**CHIN 102 Chinese II** **3c-01-3cr**

**Prerequisite:** CHIN 101

A continuation of CHIN 101, this course continues the student's acquisition of Chinese, with attention focused on the four basic skills: reading, writing, speaking, and listening. Also imparts knowledge of Chinese culture. Primary emphasis is on the further development of oral communication and writing skills. Attendance and language lab practice are required.

**CHIN 201 Intermediate Chinese III** **3c-01-3cr**

**Prerequisite:** CHIN 102

An intermediate course for students who have already studied Chinese. A continuation of mastery of the four basic skills: reading, writing, speaking, and listening. Also imparts knowledge of Chinese culture. Attendance and language lab practice are required.

**CHIN 202 Intermediate Chinese IV** **3c-01-3cr**

**Prerequisite:** CHIN 201

An intermediate course for students who have already studied Chinese. A continuation of mastery of the four basic skills: reading, writing, speaking, and listening. Also imparts knowledge of Chinese culture. Attendance and language lab practice are required.

**CHIN 281 Special Topics** **var-1-3cr**

**CHIN 481 Special Topics** **var-1-3cr**

**CHIN 482 Independent Study** **var-1-3cr**

**CHSS: College of Humanities and Social Sciences**

**CHSS 342 Social Studies Teaching Lab** **0c-11-1cr**

**Prerequisites:** EDUC 242 and currently enrolled in EDUC 342

A laboratory experience providing the opportunity to explore and experiment with strategies and methodologies connected with teaching in the various disciplines of the Social Studies. Offers hands-on experience with public school students in a controlled setting. Allows students to experience middle and high school settings as well as build a repertoire of Social Studies teaching methodologies that enables them to complete EDUC 342 more effectively.

**CHSS 489 Honors Colloquium** **3c-01-3cr**

**Prerequisites:** Admission to a Departmental Honors Program in College of Humanities and Social Sciences, HNRC 201, or instructor permission  
A multidisciplinary colloquium emphasizing problem-solving, discussion, reading, and writing on a topic or theme that will vary from semester to semester according to the expertise of the faculty member(s) teaching the course. Could focus on an issue that would be explored from a number of multidisciplinary perspectives, or bring related disciplines together to cover issues that spring from a common methodological technique. Open to all students who have been admitted to the Departmental Honors Program in their major, to Robert E. Cook Honors College students who have completed HNRC 201, and, with instructor permission, to other juniors or seniors who have a cumulative GPA of at least a 3.5.

**CNSD: Counseling and Student Development**  
**The Counseling Center**  
**Student Affairs Division**

**CNSD 150 Life Skills: Improving Your Social and Emotional Intelligence** **1c-01-1cr**

**Prerequisite:** Instructor permission

Provides practical, hands-on, cognitive, emotional, and interpersonal skills which help students to increase their abilities to process and respond to environmental demands and stresses of their social and academic environment. These skills include mindfulness, emotion regulation, behavior management, and handling relationships by understanding emotions in others. The goals are to understand basic principles of emotion regulation and interpersonal effectiveness, improve students' ability to focus, and attend to one's own thoughts and feelings as they apply to the skills described above.

**CNSV: Consumer Affairs**  
**Department of Human Development and Environmental Studies**  
**College of Health and Human Services**

**CNSV 101 Personal and Family Management** **3c-01-3cr**

Management as a system and its relationship to individuals and families. Formulation of goals, values, and standards; use of decision-making process; utilization of resources.

**CNSV 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CNSV 299 Cooperative Education I** **0sh**

Combines theory with practical application through job-related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. First of two alternating work experiences required.

**CNSV 315 Consumer Economics and Family Finance** **3c-01-3cr**

Economic, sociological, and psychological principles are applied to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

**CNSV 413 Problems in Consumer Economics** **3c-01-3cr**

**Prerequisite:** CNSV 315 or Economics

Problems of consumer-seller relationships studied with an emphasis given to effects of current economic and social forces. Governmental and private protection agencies which aid the consumer are reviewed. Individual investigations required.

**CNSV 416 Problems in Family Finance** **3c-01-3cr**

**Prerequisite:** CNSV 315

In-depth theories and principles in personal and family finance and the rights and responsibilities of consumers are emphasized. Opportunities are provided to explore specific areas of interest.

**CNSV 433 Study Tour** **var-1-6cr**

**Prerequisite:** Upper-level standing

An opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. May be repeated for a total of 6cr. (Cross-listed as FSMR/INDS 433)

**CNSV 481 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**CNSV 482 Independent Study** **var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles or in the management of resources. May be repeated for a total of 3cr. Students meet with a faculty member at least 5 hours per credit.

**CNSV 493 Internship** **var-1-12cr**

**Prerequisites:** Approval of instructor and department chairperson; upper-level standing

A practical experience related to the student's major area of study with objectives, supervised experience, and evaluation. May be repeated for a total of 12cr.

**COMM: Communications Media**  
**Department of Communications Media**  
**College of Education and Educational Technology**

**COMM 101 Communications Media in American Society** **3c-01-3cr**

Required of COMM majors. An introduction to the evolution, status, and future of communications media. Explores intrapersonal communication through self-assessment, values clarification, and feedback; interpersonal communication through interviews, observations, case studies, and gaming; and mass communications through the examination of the processes and the technology utilized to disseminate and manage information. Career paths, field applications, professional associations, and the primary literature are investigated.

**COMM 103 Digital Instructional Technology** **3c-01-3cr**

**Prerequisite:** Education major

Introduces freshman pre-service teachers to the ever-changing world of digital instructional technology. Learners are exposed to computer-based tools of the trade used by teachers in the delivery and management of instruction. Does not count towards credits needed for COMM major.

**COMM 150 Aesthetics and Theory of Communications Media** **3c-01-3cr**

**Prerequisite:** COMM 101

Examines the theoretical assumptions of sight, sound, and motion as applied to the design of communication products for different media formats. Demonstrates strategies for creative composition. Discusses psychological and physiological implications of images.

**COMM 151 Basic Lighting for Still and Motion Imagery** **1c-01-1cr**

Examines the basic technical and design aspects of artificial and natural lighting in capturing still and motion imagery. Emphasizes mastery of the terminology and simulation of lighting concepts and conditions through virtual lighting software.

**COMM 201 Internet and Multimedia** **3c-01-3cr**

**Prerequisite:** BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail

Focuses on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. Information literacy course for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**COMM 205 Making Presentations with Media** **3c-01-3cr**

**Prerequisites:** COMM 101

An introduction to basic presentation skills, emphasizing the use of media to enhance presentations. Students research, organize, and write presentations; design appropriate media; and deliver individual and team presentations.

**COMM 230 Issues in International Communication** **3c-01-3cr**

A survey of international communications with particular emphasis on communications flow, four-press theories, ownership, structure and access to media, government/media relationships, and the impact of communications on developed and developing countries.

**COMM 240 Communications Graphics** **3c-01-3cr**

**Prerequisite:** COMM 101 or permission

An introduction to graphic design concepts and related processes and techniques for a variety of forms of presentation media including television, multimedia, and online communications for educational, corporate training, and communications specialists. Both two- and three-dimensional design and basic animation concepts are explored. Hands-on experiences using a variety of graphic software applications.

**COMM 249 Basic Audio Recording Techniques** **3c-01-3cr**

**Prerequisites:** COMM 101, permission

Theory and practice of recording sound, developing an understanding of the language of sound recording as well as the ability to make sound recordings. Offers exposure to recording for various media including radio, music, motion pictures, television, and multimedia production. Material also appropriate for teachers who wish to make use of tape recorder in the classroom. Provides hands-on experience through labs and projects to be completed outside of class. Students are expected to provide an audio tape recorder.

**COMM 251 Television Production** **3c-01-3cr**

**Prerequisites:** COMM 101, permission

Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities.

**COMM 271 Beginning Photography** **3c-01-3cr**

**Prerequisite:** COMM 101 or permission

Introduces beginning photography students to photography as a tool for communications and as a lifelong leisure activity. Covers basic camera operation and other means of image acquisition, imaging processing and manipulation, printing, and photo finishing. Student is required to have a camera, preferably a single-lens reflex, with fully manual focusing and exposure capability.

**COMM 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**COMM 302 Research in Communications Media** **3c-01-3cr**

**Prerequisites:** COMM 150, ENGL 101 and 202 (grade of C or better)

Provides knowledge of the resource materials and research strategies used in the communications media field. Students design basic data gathering instruments, collect data, and assimilate information from various sources and data into communication products, services, or documents.

**COMM 303 Scriptwriting** **3c-01-3cr**

**Prerequisites:** COMM 101, ENGL 101 and 202 (grade of C or better) or instructor permission

An introduction to the design of media materials and script writing. Style and techniques of writing are analyzed. Classroom emphasis is on writing, critiques, and revision of designs and scripts. Scripts for audio, multimedia presentations, and motion picture and television productions will be written.

**COMM 305 Electronic Media Programming and Sales** **3c-01-3cr**

**Prerequisite:** COMM 150

Explores two primary functions of the electronic media: providing programming for audiences and providing economic viability to media outlets by selling commercial time to clients. Explores topics such as program development, scheduling, and promotion. Also explores the basic strategies used in the electronic media to sell commercial time and the use of audience and ratings analysis in the processes of programming and sales.

**COMM 306 2D Digital Game Development** **3c-01-3cr**

**Prerequisite:** COMM 150, any COMM production course or instructor permission

Examines the theory and development of digital games. Topics explored include the logics of gameplay, the process of game development, gaming technology, and the psychology of gaming. The history and organization of the gaming industry are also examined. Students also create deliverables

around a game concept they develop in the process of completing the course. (Offered as COMM 405 prior to 2011-12)

**COMM 325 Women in Media** 3c-01-3cr

An overview of women in media (including television, film, radio, the Internet, etc.) and some of the issues women face. Emphasizes the historical development of women in the media both nationally and internationally. Identifies some key women in the history of media and discusses the difference between female icons of the past and present. Explores the impact women have had on media and society and the way women are portrayed by the media.

**COMM 330 Instructional Design for Training and Development** 3c-01-3cr

**Prerequisites:** COMM 101, ENGL 101 and 202 (grade of C or better) or instructor permission

Examines the systems approach for the design, development, and evaluation of instructional material. Students learn about the history of instructional design and development and the current status of the field. Each student produces a self-instructional prototype that requires the student to systematically and creatively apply the concepts and rules learned.

**COMM 335 Communications Consulting and Project Management** 3c-01-3cr

**Prerequisite:** COMM 101

Presents the theoretical views and clinical applications of consulting skills and practices associated with and needed by communication professionals. Presented are the functions and role of the consultant, the client's perspective on consulting, hiring a consultant, ethics in consulting, personal assessment tests, and related literature and models.

**COMM 340 Advanced Communication Graphics** 3c-01-3cr

**Prerequisites:** COMM 240, permission

Provides in-depth experience in planning and preparing graphic materials commonly used in the communications profession; graphic materials include design, photosketching, lettering, slide titling and duplication, preparation of camera-ready art, lithographic film and master layout sheets, professional slide flat production and photocopy, large-format transparency production, color key, and color systems.

**COMM 345 Television Criticism** 3c-01-3cr

**Prerequisite:** COMM 150 or instructor permission

The medium of television offers a unique environment for development and delivery of information, entertainment, and news. Explores and analyzes television programming. Includes examination of genres ranging from situation comedy to drama, to mini-series and made-for-TV movies.

**COMM 348 Animation** 3c-01-3cr

**Prerequisite:** COMM 150, any COMM production course or instructor permission

Introduces traditional and digital animation techniques and offers practical experience in planning and producing animated sequences. Includes a history of animation, and theories of animation, both applied and as a communication medium. Practice in designing, drawing, modeling, simulating, creating, and texturing animated sequences; preparation of character designs; story boards and cue sheets; integration of visual effects, animation, and sound. (Offered as COMM 447 prior to 2011-12)

**COMM 349 Radio Production** 3c-01-3cr

**Prerequisite:** COMM 150 or instructor permission

An introduction to production techniques as they pertain to radio. Exposure to programming, scripting, producing programs, intros, outros, commercials, public service announcements, station identifications, and promotional announcements. Also deals with the interaction of a radio station with national networks and with the real-life concerns of deadlines.

**COMM 351 Advanced Video Production** 3c-01-3cr

**Prerequisite:** COMM 251

A production course that emphasizes advanced field production techniques. Some topics include field lighting, video post-production editing with A-B roll, online editing, and nonlinear editing. Provides hands-on experience through projects and field trips.

**COMM 354 Broadcast Regulation** 3c-01-3cr

**Prerequisite:** COMM 150 or instructor permission

Delves into the areas of law affecting broadcasters. Covers laws pertaining to cable television, station licensing and renewal, political broadcasting, libel, copyright, the right of reply, and privacy. Examines the historical development of the FCC and its jurisdictions. Discusses case studies along with the relevancy of some laws as they pertain to today's society.

**COMM 371 Photography II: The Print** 3c-01-3cr

**Prerequisites:** COMM 271, permission

Develops camera and print-making skills to the degree that salon-quality photographic prints can be produced. Students will understand the photographic processes utilized in producing a high-quality negative and print to the extent that they can manipulate those processes to communicate an intended message with their photographs. Emphasizes camera and print control as well as composition and negative and print manipulation.

**COMM 374 Documentary Photography** 3c-01-3cr

**Prerequisites:** Junior/senior standing, COMM 101, or instructor permission

Prepares students to photograph documentary content that explores aspects of historical significance, cultural value, social change, and social injustice. Explores the differences and similarities between documentary photography and purely aesthetic photography in order to capture images focused on social and historical value. Calls for students to critically analyze documentary images, projects, photographers, and the societal impact they have made in order to create new and influential images for modern and future utilization. Students are required to have access to a digital camera. (Offered as COMM 474 prior to 2010-2011)

**COMM 375 Mass Media and Behavior** 3c-01-3cr

**Prerequisites:** PSYC 101 and junior or senior status

Theory and research on the influence of the mass media on human behavior and attitudes. Topics include the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as PSYC 375; may be taken only once)

**COMM 380 The History of African Americans in Film** 3c-01-3cr

Traces the historical development of the roles of African Americans in film and television. Examines the early stereotypic portrayals of this group, the origins of these stereotypes, and the ongoing changes, positive and negative, that have occurred regarding the media representation through research, film, and archetypal analysis, observation, and discussion. The new generation of African American filmmakers and their creative efforts to promote more realistic portrayals are analyzed.

**COMM 390 Practicum in Communications** var-1-3cr

**Prerequisites:** COMM major, department permission

A specialized study under the supervision of a faculty sponsor. Students make media service contributions to department and campus media-related facilities, while receiving credit. For each practicum credit, students will log a minimum of 90 hours of service. A maximum of 6 practicum credits can be used within a 120-credit degree program. The combination of practicum and internship credits cannot exceed 15 credits.

**COMM 395 Career Planning in Communications Media** 1c-01-1cr

**Prerequisites:** COMM majors only with junior/senior status

Serves as the primary skill-building and strategy-seeking experience for the internship program and later career entry and growth. Extensive writing, research, and individual counseling are involved.

**COMM 401 Promotion for Radio, Television, and Cable** 3c-01-3cr

**Prerequisite:** COMM 150

Teaches the promotion processes used by promotion directors at radio stations, television stations, and cable outlets. Emphasis is placed on understanding the purpose and application of demographic and psychographic targeting of the television, radio, and cable audiences. Students are involved in a project to effectively promote IUP's on-campus radio and/or television station. Helps students understand how to build audiences in the competitive television, radio, and cable environments.

- COMM 403 Broadcast Newswriting** 3c-01-3cr  
**Prerequisites:** COMM 101, ENGL 101 and 202 (grade of C or better) or instructor permission  
 Acquaints students with the various styles and script formats used in writing news scripts for radio and television. Includes instruction in writing news stories for radio and television and an introduction to broadcast news production. Practice and work to improve writing skills in this area of broadcast writing.
- COMM 406 3D Game and Simulation Design and Development** 3c-01-3cr  
**Prerequisite:** Junior standing or instructor permission  
 Examines the theory and development of 3D digital games and simulations from a Communications Media perspective. Learners are exposed to topics, such as the logical structure of 3D games and simulations, 3D game technology, and the process of 3D digital game development. Learners are also exposed to the history and organizational structure of the 3D game industry as well as its theory and history.
- COMM 408 Media Field Studies** 3c-01-3cr  
**Prerequisites:** COMM 101, junior standing, and instructor permission  
 A hands-on course to help students learn about the production process involving on-location production. Has three distinct phases: students begin with research and preproduction tasks on campus, may travel to a remote site to collect additional information and images, and use those images to complete a production; students are responsible for travel expenses.
- COMM 440 Multimedia Production** 3c-01-3cr  
**Prerequisite:** COMM 240 or instructor permission  
 Presents the processes and techniques of planning, designing, and producing used with interactive multimedia. Provides hands-on experiences in the use of graphics, audio, animation, video, and authoring software applications to produce an aesthetically acceptable product that meets specific objectives. Meets the needs of educational media, corporate training, and communications specialists.
- COMM 445 Applications and Techniques of Motion Pictures** 3c-01-3cr  
**Prerequisite:** COMM 150 or instructor permission  
 A survey of the role that motion picture film production plays in society. A major emphasis is on the variety of applications with special consideration given to motion pictures as a tool to support research.
- COMM 446 3D Modeling and Animation for Games and Simulations** 3c-01-3cr  
**Prerequisite:** Junior standing or instructor permission  
 Examines the basic principles of three-dimensional computer modeling and animation. Learners are exposed to an overview of the history of computer-based animation and the fundamental theories behind digital animation and modeling. They also receive an introduction to the design and development of three-dimensional computer-based models and animation. Topics, e.g., aesthetics, as well as modeling, texturing, lighting, animating and rendering, rigid body dynamics, and manipulations of meshes through bones are discussed. Forward and inverse kinematics, object hierarchies, and animation techniques, including frame-based, particle system, and physics-based/algorithmic, are described and applied.
- COMM 449 Advanced Audio Recording Techniques** 3c-01-3cr  
**Prerequisites:** COMM 249, permission  
 Sound recording utilizing advanced techniques and concentrating on specific applications. Students participate in an intensive lab experience utilizing the most advanced equipment available. Emphasizes application, editing, signal processing, and multi-track recording. Student is expected to produce a sound recording for a specific use of professional quality.
- COMM 451 Broadcast News Process** 3c-01-3cr  
**Prerequisites:** COMM 251, 349, permission  
 Reporting and presenting radio and TV news programs. Analysis of news and public affairs broadcasting.
- COMM 460 Emerging Trends in Communication Technology** 3c-01-3cr  
**Prerequisite:** COMM 150  
 An introduction to the ever-changing world of telecommunication technologies, focusing on modern, computer-driven modes of information exchange. Provides an opportunity to synthesize several of the technologies covered and integrate them into a workable solution to a practical telecommunication problem.
- COMM 470 Management Practices in Electronic Communications** 3c-01-3cr  
**Prerequisites:** COMM 150, any COMM writing-intensive course, and junior or senior standing  
 Presents the theory and practice of media management. Areas covered include problem-solving, documenting and reporting, career systems, budgeting, personnel, ownership, unionization, market analysis, and special topics as directly related to communications media industries. Students conduct case study research related to their career direction.
- COMM 471 Electronic Imaging** 3c-01-3cr  
**Prerequisite:** COMM 271 or permission  
 An introduction to the use of electronic still photography (ESP) for the capture, recording, and transfer of still images and the use of computers for the storage, manipulation, and output of color and black and white photography. Extensive training in the use of software packages for image enhancement, restoration, and manipulation is provided. Students learn the applications of this technology to the print media and examine the ethical and legal issues of image manipulation.
- COMM 475 Senior Portfolio Presentation** 1c-01-1cr  
**Prerequisites:** COMM majors only and COMM 395  
 Students compile and present a series of works produced through previous COMM courses and activities. The result is a portfolio suitable for presentation to a potential employer. The portfolio may include examples of student works from a variety of subject areas.
- COMM 480 Seminar in Communications Media** 3c-01-3cr  
**Prerequisites:** Junior or senior standing, other prerequisites as appropriate to course content  
 A seminar in selected communications issues or problems. Includes the reading and review of the current literature as appropriate to the major topic presented in the seminar.
- COMM 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.
- COMM 493 Internship** var-6, 9, 12cr  
**Prerequisites:** COMM 395, department approval  
 A supervised professional summer work experience in communications media. Sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, length of internship, and hours are individually tailored to student career goals. Sites represent wide application of process and technology of communications in business, education, allied health, or other agencies. Students must complete 40 hours of the internship work experience per credit earned. A maximum of 15cr is applicable to an undergraduate degree program from any combination of internship and practicum experience.

**COSC: Computer Science**  
**Department of Computer Science**  
**College of Natural Sciences and Mathematics**

- COSC 101 Computer Literacy** 3c-01-3cr  
 An introductory course providing fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. Emphasizes the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management, presentation graphics, web browsers, search strategies, and

e-mail), and the social and ethical aspects of the impact of computers on society. (Does not count toward COSC major.) Note: cross-listed as BTED/IFMG 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**COSC 105 Fundamentals of Computer Science** 3c-01-3cr

The first course for COSC majors. Required of all COSC students; appropriate for other Natural Sciences and Mathematics students. Topics include the fundamental concepts of computer architecture, algorithm development and analysis, programming languages, software engineering, data organization and representation, and systems software. A hands-on introduction to computer usage with an emphasis on terminology and the underlying connections within the discipline.

**COSC 110 Problem Solving and Structured Programming** 3c-01-3cr

For Science, MATH, and COSC majors and for others who have a sufficiently quantitative orientation. Basic structure of modern digital computers; problem analysis and computer solution using flowcharting and the C++ language. Exemption or credit by examination possible.

**COSC 201 Internet and Multimedia** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail

Focuses on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. An information literacy course for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**COSC 205 Programming Languages for Secondary Education** 3c-01-3cr

**Prerequisite:** Education major

An introduction to the three high-level programming languages most commonly used in secondary education: Pascal, LOGO, and BASIC, with particular emphasis on Pascal. Also includes a comparative study of the control structures and data structures present in these three languages. Intended to establish a solid foundation to prepare prospective teachers of computing courses K-12. (Note: Previous experience with microcomputers is strongly recommended. Does not count toward a COSC major. Credit toward graduation is not given if this course is taken after completing 6cr or more of COSC courses.)

**COSC 210 Object-Oriented and GUI Programming** 3c-01-3cr

**Prerequisite:** COSC 110

An in-depth introduction to the Object-Oriented Programming (OOP) paradigm. Focuses on designing, implementing, and using objects. Covers function and operator overloading, templates, inheritance, and polymorphism. Also includes an introduction to Graphical User Interface (GUI) design and programming.

**COSC 220 Applied Computer Programming** 4c-01-4cr

**Prerequisite:** COSC 110 or equivalent

Structured programming principles and techniques, as implemented through the ANSI COBOL language; program design using top-down techniques; program and project documentation; introduction to sequential and random file algorithms and integrated file systems.

**COSC 250 Introduction to Numerical Methods** 3c-01-3cr

**Prerequisites:** COSC110, MATH 121 or 125

Algorithmic methods for function evaluation, roots of equations, solutions to systems of linear equations, function interpolation, numerical differentiation, and integration; and use spline functions for curve fitting. Focuses on managing and measuring errors in computation. Also offered as MATH 250; either COSC 250 or MATH 250 may be substituted for the other and

may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**COSC 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**COSC 300 Computer Organization and Assembly Language** 3c-01-3cr

**Prerequisite:** COSC 110 or equivalent

A discussion of the basic computer architecture elements: gates, combinational and sequential logic, hardware arithmetic, CPU, and memory structure. An examination of the languages of machines: representation of data, addressing techniques, symbolic coding, assembly, and linking. Problem solving using assembly language.

**COSC 310 Data Structures and Algorithms** 3c-01-3cr

**Prerequisite:** COSC 210

Fundamental concepts of data design and implementation, data abstraction, data structures, arrays, linked-lists, stacks, queues, recursion, trees, graphs, and hashing. Also covers sorting algorithms, divide and conquer techniques, greedy methods, and analysis of algorithms. The object-oriented paradigm is employed using an object-oriented language.

**COSC 315 Large File Organization and Access** 3c-01-3cr

**Prerequisite:** COSC 220

The organization of large computer files for business systems, information systems, and other applications. The use of advanced COBOL for efficient file access. An evaluation of file access methods and directory organization. An introduction to random file algorithms and integrated file systems.

**COSC 316 Host Computer Security** 3c-01-3cr

**Prerequisite:** COSC 110 or equivalent course, as approved by instructor

An introduction to the theory and concepts of host computer security. Topics include security and policy guidelines, attack strategies and attacker profiles, users and groups security, file systems and security, integrity management, cryptography basics, back-up utilities, auditing and logging, and strategies for defending user accounts. A practical, hands-on course.

**COSC 319 Software Engineering Concepts** 3c-01-3cr

**Prerequisite:** COSC 310 or instructor permission

Software engineering concepts include the collection of tools, procedures, methodologies, and accumulated knowledge about the development and maintenance of software-based systems. Strongly suggested for any student planning to take an internship in COSC. After an overview of the phases of the software lifecycle, current methodologies, tools, and techniques being applied to each phase are discussed in depth with localized exercises given to reinforce learning of concepts.

**COSC 320 Software Engineering Practice** 1c-2d-3cr

**Prerequisite:** COSC 319 or instructor permission

Planning, design, and implementation of large software systems using software engineering techniques. Students work in project teams on real or realistic software development projects. Credit for either COSC 320 or 493, but not both, may count toward COSC major requirements for graduation; the other course credits are free electives.

**COSC 341 Introduction to Database Management Systems** 3c-01-3cr

**Prerequisites:** COSC 110, 210

Provides fundamental knowledge of, and practical experience with, database concepts. Includes study of information concepts and the realization of those concepts using the relational data model. Practical experience gained in designing and constructing data models and using SQL to interface to both multi-user DBMS packages and to desktop DBMS packages.

**COSC 345 Computer Networks** 3c-01-3cr

**Prerequisites:** COSC 110; MATH 121 or 125; and MATH 214 or 216 or 217; or equivalents

Covers data communications, computer network architectures, functions of various network layers, communication protocols, internetworking, emerging high-speed networks. (Titled Data Communications prior to 2007-08)

**COSC 352 LAN Design and Installation** 3c-01-3cr

**Prerequisite:** IFMG 250 or BTST 273 or any COSC course numbered 300 or higher

A study of fundamental local area networking concepts. A detailed study of the basics of local area network (LAN) technology. A comparative study of commercially available LAN systems and products. Features a hands-on laboratory implementation of a LAN. Cross-listed as IFMG 352. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

**COSC 354 Testing and Controlling LANs** 3c-01-3cr

**Prerequisite:** COSC 352 or IFMG 352 or equivalent

Explores local area network (LAN) topologies and their associated protocols. Introduces ways of interconnecting, securing, and maintaining LANs. Provides hands-on experience in the interconnection of multiple LANs. Also presents a hands-on approach to design, testing, and administration of interconnected LANs. Cross-listed as IFMG 354. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

**COSC 355 Computer Graphics** 3c-01-3cr

**Prerequisites:** COSC 310 and junior status

The use of computer graphics hardware and software. An overview of current applications and experience with representative software will introduce current practice. Foundations in primitives, geometry, and algorithms of passive computer graphics are the principal focus. A brief introduction to interactive computer graphics is included.

**COSC 356 Network Security** 3c-01-3cr

**Prerequisite:** COSC 316 and either COSC 345 or COSC/IFMG 352

Explores mechanisms for protecting networks against attacks. Emphasizes network security applications that are used on the Internet and for corporate networks. Investigates various networking security standards and studies methods for enforcing and enhancing those standards.

**COSC 362 Unix Systems** 3c-01-3cr

**Prerequisite:** COSC 310 or instructor permission

An introduction to the features, syntax, applications, and history of Unix. Coverage includes utilities, system administration, development environments, and networking concerns including distributed systems, client-server computing, and providing Web services.

**COSC 365 Web Architecture and Application Development** 3c-01-3cr

**Prerequisites:** COSC 310 and 341 or instructor permission

Covers the fundamental architecture of Internet systems and the process of developing computer applications running on the Internet in general and on the World Wide Web in particular. Students gain a basic understanding of the TCP/IP protocols and the client/server technology. Methods, languages, and tools for developing distributed applications on the Internet are evaluated. Programming projects developing distributed applications, using a representative suite of development tools and languages, are an integral part of this course. (Offered as COSC 415 prior to 2008-09)

**COSC 380 Seminar on the Computer Profession and Ethics** 2c-01-2cr

**Prerequisite:** Instructor permission

Reading, review, and discussion of the current literature of computer science and industry trade journals; effective oral presentations; employment prospects. Topics on computer ethics and review of case studies on computer ethics from professional journals with discussion of the issues involved. Should be taken the semester before an internship or the first semester of the senior year. Should not be taken at the same time as COSC 480.

**COSC 405 Artificial Intelligence** 3c-01-3cr

**Prerequisite:** COSC 310

An introduction to the field of artificial intelligence, i.e., the study of ideas that enable computers to process data in a more intelligent way than con-

ventional practice allows. Covers many information representation and information processing techniques. Explores the underlying theory including matching, goal reduction, constraint exploration, search, control, problem solving, and logic.

**COSC 410 Computer Architecture** 3c-01-3cr

**Prerequisites:** COSC 300 and 310

Introduces the underlying working principles of electronic computers. Discusses the organization and architecture of computer components. Expounds on details of memory hierarchy, I/O organization, computer arithmetic, processor and control unit design, instruction set architecture, instruction-level parallelism, and the ways functional components interact together.

**COSC 420 Modern Programming Languages** 3c-01-3cr

**Prerequisite:** COSC 310

A comparative survey of programming language paradigms. Includes an examination of the properties, applications, syntax, and semantics of selected object-oriented, functional, and declarative programming languages.

**COSC 424 Compiler Construction** 3c-01-3cr

**Prerequisites:** COSC 300 and 310

Relates the formal concepts of automata and language theory to the practicality of constructing a high-level language translator. The structures and techniques used in lexical analysis, parsing, syntax directed translation, intermediate and object code generation, and optimization are emphasized.

**COSC 427 Introduction to Cryptography** 3c-01-3cr

**Prerequisites:** COSC 310, MATH 122 or 123

Fundamental concepts of encoding and/or encrypting information, cryptographic protocols and techniques, various cryptographic algorithms, and security of information are covered in depth.

**COSC 430 Introduction to Systems Programming** 3c-01-3cr

**Prerequisites:** COSC 300 and 310

Concepts and techniques of systems programming with an emphasis on assembly, linking, loading, and macro processing for user programs. An overview of higher-level language translation and system control. Programming and research projects.

**COSC 432 Introduction to Operating Systems** 3c-01-3cr

**Prerequisites:** COSC 300, 310 or equivalents

An introduction to the principles of operating system design and implementation. Topics include interrupt service, process states and transitions, spooling, management of memory and disk space, virtual storage, scheduling processes and devices, and file systems.

**COSC 444 Productivity Tools and Fourth Generation Language** 3c-01-3cr

**Prerequisite:** COSC 341 or IFMG 390

Students develops an understanding of productivity issues and how Fourth Generation Languages (4GL) improve productivity as contrasted with 3GLs. Students advance in the programming paradigm such as event-driven programming, objects, reusability, graphical user interface (GUI) design and development, information systems based on relational databases, and client/server technology are addressed. Students gain a practical experience with these concepts through an in-depth study of Visual Basic and the development of a GUI interface to a relational database using Visual Basic. (Offered as COSC 344 prior to 2008-09)

**COSC 450 Applied Numerical Methods** 3c-01-3cr

**Prerequisites:** COSC 250, MATH 171, 241, or equivalents

Polynomial approximations using finite differences, with applications in numerical integration and differentiation. Numerical solution of initial value ordinary differential equations. The APL language is introduced and used, along with FORTRAN, in programming selected algorithms.

**COSC 451 Numerical Methods for Supercomputers** 3c-01-3cr

**Prerequisites:** MATH 121 and 122, or MATH 123 or 127, MATH 171, COSC 250

Supercomputers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students are introduced to these features and learn how numeri-

cal algorithms can be constructed to exploit supercomputers' capabilities. They gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as MATH 451; may not be taken for duplicate credit)

**COSC 460 Theory of Computation** **3c-01-3cr**

**Prerequisite:** COSC 310 or instructor permission

Formal methods for describing and analyzing programming languages and algorithms. Covers Backus-Naur forms, productions, regular expressions, introduction to automata theory, Turing machines, and recent concepts in algorithm theory computability.

**COSC 480 Seminar on Technical Topics** **0c-11-1cr**

**Prerequisites:** See text below

Reading, review, and discussion of the current literature of computer science and industry professional and technical journals; oral presentations. Should be taken the last semester of the senior year. Should not be taken at the same time as COSC 380.

**COSC 481 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

A seminar in advanced topics of computer science; content varies depending on interests of instructor and students. May be repeated for additional credit. Special Topics numbered 481 are primarily for upper-level undergraduate students.

**COSC 482 Independent Study** **var-1-4cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval based on academic appropriateness and availability of resources.

**COSC 485 Independent Study** **var-1-4cr**

**Prerequisites:** Permission of a computer science faculty member who agrees to supervise the student's project. Arrangements for selection of a specific topic must be made.

**COSC 493 Internship in Computer Science** **var-6-12cr**

**Prerequisites:** COSC 105, 110, 210, 220 (except Languages and Systems track), 300, 310, 319, 341, 380, other courses depending on type of internship position desired, completion of application, and selection by a faculty committee. COSC 319, 341, and 380 prerequisite may be waived when registering for first 6cr.

Positions with participating companies provide students with paid experience in Computer Science under supervision of the companies and faculty. Requirements include three on-site consultations (one during first 6cr and two in final 6cr), two university consultations (one during first 6cr and one in final 6cr), completion of progress reports, oral presentation (final 6cr only), and a final cumulative paper (final 6cr only). An internship is offered only to students who have completed their sophomore year. No more than 2cr of the first 6cr of COSC 493 and 2cr of the last 6cr of COSC 493 may be applied toward the credit requirement for a major in COSC. Internship can be completed as one 12cr unit over a minimum of 23 weeks or in two 6cr units each over a minimum of 12 weeks. (Writing-intensive course. As such, an internship requires completion of designated writing-intensive components.)

**COUN: Counselor Education**

**Department of Counseling**

**College of Education and Educational Technology**

**COUN 250 Developing Interpersonal Relationship Skills** **1c-01-1cr**

Teaches interpersonal relationship skills: listening, communicating, group dynamics, decision making, leadership, assertiveness, time-use management, problem solving, and conflict resolution. Restricted to residence hall counselors.

**COUN 253 Counseling in School Settings** **3c-01-3cr**

An elective course providing in-service teachers and school personnel, other than counselors, with a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups. Restricted to peer tutors.

**COUN 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**COUN 481 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**COUN 482 Independent Study** **var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**CRIM: Criminology**

**Department of Criminology**

**College of Health and Human Services**

**CRIM 101 Crime and Justice Systems** **3c-01-3cr**

Introduces the field of criminology through the examination of historical data, statistical information, theories of criminal causation, social control of behavior, development of laws, evaluation of criminal justice system policies, procedures, and trends. Students learn the terminology of the field, gain an awareness of the methods of inquiry utilized in the field, and have the opportunity to examine personal attitudes and values regarding crime and responses to crime.

**CRIM 102 Survey of Criminology** **3c-01-3cr**

Provides an understanding of the discipline of criminology through an examination of its theories, basic assumptions, and definitions.

**CRIM 205 Policing and the Community** **3c-01-3cr**

**Prerequisite:** CRIM 101 or 102

Introduces the history, function, and role of policing in American society. The multidimensional work of policing is emphasized with particular attention to strategies employed to combat and prevent crime through computer technology and advancements in nonlethal and lethal methods. Organizational and personal selections also are covered, as these are intimately connected to the structure and composition of the communities serviced. Practical and critical approaches to law enforcement are undertaken to explore prevailing and dissenting perspectives on the issues covered.

**CRIM 210 Criminal Law** **3c-01-3cr**

**Prerequisites:** CRIM 101 or 102 or departmental permission

A study of the history and sources of criminal law coupled with an analysis of the substantive elements of specific crimes.

**CRIM 215 Survey of Courts and the Criminal Justice System** **3c-01-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission

Examines the historical background, the traditions, and the legal principles that underlie the courts as an integral component of the American system of criminal justice. Both differences and similarities inherent within the state and federal court processes are analyzed, and the procedures through which the criminal courts uphold the basic rights and liberties of all United States citizens, both victims and the accused, are explored. The dynamics of the judiciary are considered through examination of the critical foundation of the judicial process. A primary focus is placed upon understanding the

respective roles played by judges, prosecuting attorneys, defense counsel, police, probation officers, and other court-related personnel in the criminal court process.

**CRIM 225 Survey of Corrections 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission  
States and emphasizes the role of corrections in the social control of human behavior. Includes the history of corrections, classic and contemporary thought about the role of corrections in the criminal justice system, and a survey of correctional methods and alternatives with an emphasis on the use of incarceration.

**CRIM 235 Survey of Juvenile Justice and Juvenile Law 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission  
Provides an understanding of the juvenile justice system and the various cases and legislative initiatives that have affected juvenile justice policy, in addition to examining the evolution of the juvenile justice system and the transformation of the current issues in juvenile justice in the United States. Attention is also focused on juvenile justice policies and procedures in other countries.

**CRIM 255 Law, Social Control, and Society 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission  
The evolution and development of the modern legal system. Topics include civil, criminal, and administration law, the legal profession, legal systems in American society, and the law as one of many instruments of social control and social change.

**CRIM 281 Special Topics var-1-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**CRIM 300 Theory of Complex Criminal Justice Organizations 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
The study of the evolution and theories of organizational alternatives and their application to the administration of justice.

**CRIM 306 Criminological Research Methods 3c-01-3cr**

**Prerequisites:** CRIM 101 and 102 and junior standing  
An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.

**CRIM 321 Cybersecurity and Loss Prevention 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
Addresses the cybersecurity threat from a more comprehensive standpoint. Challenges students to recognize and understand security concerns from multiple perspectives, ranging from the insider threat to threats involving the actual physical components. Exposure to a design methodology, associated system components modules, and basic security principles is featured. Students also are exposed to the private and public responses to computer security problems, including the insider threat, domestic and foreign terrorism, and a number of unique computer crimes and solutions to deal with these crimes. The importance of a sound security policy in the overall management of any organization is addressed.

**CRIM 323 Cybersecurity and the Law 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
Examines the scope of cybercrime and its impact upon today's system of criminal justice. Includes cybercrime and the Bill of Rights, computer-based economic crime, electronic commerce, ethical challenges, and the Computer Fraud and Abuse Act. Includes an analysis of the legal considerations facing law enforcement and cybersecurity professionals who deal with the problem of discovering, investigating, and prosecuting cybercrime.

**CRIM 344 Terrorism 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102

An investigation of the context, causes, correlates, consequences, and responses to the crime of terrorism from a variety of perspectives. Individual, group, and organizational factors that shape terrorism and responses to terrorism are explored. Strategies for reducing the threat of terrorism and its consequences are examined.

**CRIM 354 White-Collar Crime 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
An introduction to various topics and issues relating to white-collar crime. Theories and measurements of white-collar, corporate, organizational, occupational, workplace, and organized crimes are presented and compared. Prevention, legal issues, and control strategies are presented.

**CRIM 374 Environmental Crime and Justice 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
Introduces the developing area of criminological solutions to environmental problems. Issues addressed include the nature of environmental offenders and victims, the variety of approaches to achieving environmental justice, and criminal justice solutions to specific environmental problems.

**CRIM 384 Violence and Victimology 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
Introduces the leading theories and research in the area of violent criminal behavior and victimization. A special emphasis is on patterns of violent offending and victimization over time, victim-offender relationships, and the experience of victims in the criminal justice system. Addresses major violent crimes including murder, rape, robbery, and assault.

**CRIM 391 Substance Use and Abuse in Criminal Justice 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
A study of substance use and abuse confronting American society. Alcohol and drug use and abuse education, philosophy, physiological effects, and social aspects are examined in terms of control measures and public safety.

**CRIM 394 Crime and Delinquency Prevention 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102 or departmental permission  
Examines various crime and delinquency prevention policies and programs. Topics include the historical development of crime and delinquency prevention methods, theoretical applications to prevention efforts, and research findings on program effectiveness. The importance of research design in evaluating prevention programs also is considered.

**CRIM 400 Theoretical Criminology 3c-01-3cr**

**Prerequisites:** CRIM 101 and 102 and junior standing  
A review and critical analysis of the major criminological theories beginning with the Classical School; psychological, sociological, economic, biological, and political theories of crime and its causes are included.

**CRIM 401 Contemporary Issues in Criminology 3c-01-3cr**

**Prerequisites:** CRIM 101 and 102 and junior standing  
An examination of the nature and extent of crime in modern Western society. Emphasizes issues selected from, but not limited to, emerging patterns of violence, organized crime, white-collar crime, victimless crime, corruption, and those crime control strategies deemed appropriate in a democracy.

**CRIM 403 Dilemmas in Criminology and Criminal Justice 3c-01-3cr**

**Prerequisites:** CRIM 101, 102, junior standing  
An overview of prominent ethical issues facing professionals in criminology and criminal justice, with an emphasis on encouraging individual students to explore their own ethical and moral systems and how they make ethical/moral decisions. Primarily discussion/seminar oriented.

**CRIM 410 Race, Ethnicity, Social Structure, and Crime 3c-01-3cr**

**Prerequisites:** CRIM 101, 102  
Introduces the art of thinking critically about the social construction of race, ethnicity, and social class in crime and crime control, with special focus on the United States.

**CRIM 450 Women and Crime 3c-01-3cr**

**Prerequisite:** CRIM 101 or 102  
A study of the nature and extent of women's crime, theories of female criminality, processing of women offenders through the criminal justice



system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

**CRIM 470 Comparative Study of Justice** 3c-01-3cr  
**Prerequisite:** CRIM 101 or 102  
 A comparison of American systems of administration of justice with those of other nations.

**CRIM 480 Seminar in Criminology–The Administration of Justice** 3c-01-3cr  
**Prerequisite:** CRIM 101 or 102  
 A study of selected topics in criminology–the administration of justice. May be taken more than once for a maximum of 6cr. Not for credit after prior CRIM 480.

**CRIM 481 Special Topics in Criminology** var-1-3cr  
**Prerequisite:** CRIM 101 and 102 or departmental permission  
 A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum 6cr.

**CRIM 482 Independent Study in Criminology** var-1-3cr  
**Prerequisite:** CRIM 101, 102, prior approval through advisor, faculty member, and Provost’s Office  
 Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**CRIM 493 Internship** var-3-12cr  
**Prerequisite:** CRIM 101, 102, 12 CRIM credits, 2.5 overall GPA, and junior standing  
 A structured field placement designed to broaden the educational experience through observation and participation in work assignments in government or private sectors. 6cr can be applied to the major requirements.

**CRLG: Critical Languages**  
**College of Humanities and Social Sciences**

Critical Languages are offered in four levels. See program description in the opening section of the College of Humanities and Social Sciences. Specific languages are offered as available.

**CRLG 101–120 Critical Languages I** 3c-01-3cr  
 Basic vocabulary and pronunciation in the target language. Oral/aural skills are stressed.

<b>CRLG 101 Arabic I</b>	<b>CRLG 109 Korean I</b>
<b>CRLG 102 Chinese I</b>	<b>CRLG 110 Modern Greek I</b>
<b>CRLG 103 Dutch I</b>	<b>CRLG 111 Portuguese I</b>
<b>CRLG 104 Finnish I</b>	<b>CRLG 112 Russian I</b>
<b>CRLG 105 Hindi I</b>	<b>CRLG 113 Swedish I</b>
<b>CRLG 106 Hungarian I</b>	<b>CRLG 114 Hebrew I</b>
<b>CRLG 108 Japanese I</b>	<b>CRLG 115 Swahili I</b>

**CRLG 151–170 Critical Languages II** 3c-01-3cr  
**Prerequisite:** Level I or acceptable equivalent  
 A continuation of the first-semester course. Depending on the language being studied, reading and writing may be introduced at this level.

<b>CRLG 151 Arabic II</b>	<b>CRLG 159 Korean II</b>
<b>CRLG 152 Chinese II</b>	<b>CRLG 160 Modern Greek II</b>
<b>CRLG 153 Dutch II</b>	<b>CRLG 161 Portuguese II</b>
<b>CRLG 154 Finnish II</b>	<b>CRLG 162 Russian II</b>
<b>CRLG 155 Hindi II</b>	<b>CRLG 163 Swedish II</b>
<b>CRLG 156 Hungarian II</b>	<b>CRLG 164 Hebrew II</b>
<b>CRLG 158 Japanese II</b>	<b>CRLG 165 Swahili II</b>

**CRLG 201–220 Critical Languages III** 3c-01-3cr  
**Prerequisite:** Level II or acceptable equivalent  
 At this first intermediate level, students begin to develop a degree of oral proficiency that varies with the language studied. Reading and writing are studied in all languages by this level.

<b>CRLG 201 Arabic III</b>	<b>CRLG 209 Korean III</b>
<b>CRLG 202 Chinese III</b>	<b>CRLG 210 Modern Greek III</b>
<b>CRLG 203 Dutch III</b>	<b>CRLG 211 Portuguese III</b>
<b>CRLG 204 Finnish III</b>	<b>CRLG 212 Russian III</b>
<b>CRLG 205 Hindi III</b>	<b>CRLG 213 Swedish III</b>
<b>CRLG 206 Hungarian III</b>	<b>CRLG 214 Hebrew III</b>
<b>CRLG 208 Japanese III</b>	<b>CRLG 215 Swahili III</b>

**CRLG 251–270 Critical Languages IV** 3c-01-3cr  
**Prerequisite:** Level III or acceptable equivalent  
 By the end of this course, the student should be able to communicate in simple terms with an educated native speaker on a topic with which the student is familiar. Ability in reading and writing varies with language.

<b>CRLG 251 Arabic IV</b>	<b>CRLG 259 Korean IV</b>
<b>CRLG 252 Chinese IV</b>	<b>CRLG 260 Modern Greek IV</b>
<b>CRLG 253 Dutch IV</b>	<b>CRLG 261 Portuguese IV</b>
<b>CRLG 254 Finnish IV</b>	<b>CRLG 262 Russian IV</b>
<b>CRLG 255 Hindi IV</b>	<b>CRLG 263 Swedish IV</b>
<b>CRLG 256 Hungarian IV</b>	<b>CRLG 264 Hebrew IV</b>
<b>CRLG 258 Japanese IV</b>	<b>CRLG 265 Swahili IV</b>

**DANC: Dance**  
**Department of Theater and Dance**  
**College of Fine Arts**

**DANC 102 Introduction to Dance** 3c-01-3cr  
 Examines dance as a performing art in both the historical and cultural contexts. Also includes the analysis of a major piece of choreography, attending live performances, and viewing select works of dance. No previous dance experience is required.

**DANC 150 Fundamentals of Dance** 3c-01-3cr  
 A basic dance technique that sequentially develops the elements of movement (space, time, force) into a variety of dance genres and period styles. Covers special care and safety of the instrument–the body.

**DANC 250 Beginning Modern Dance** 3c-01-3cr  
 Beginning modern dance technique. An introduction to the beginning elements of the choreographic process. Examines the historical development and cultural influences on the changing philosophies of modern dance performance. Performance of creative work required.

**DANC 260 Beginning Jazz Dance** 3c-01-3cr  
 Beginning jazz technique, dynamics, and selected styles that reflect an era or culture characteristic of jazz movement and music from the 1920s through the present. An introduction to the beginning elements of the choreographic process. Performance of creative work required.

**DANC 270 Beginning Ballroom and Tap Dance** 3c-01-3cr  
 A sequential development of beginning tap and ballroom dance techniques in the context of the historical development and period styles. Performance of creative work is required.

**DANC 280 Beginning Ballet** 3c-01-3cr  
 A sequential development of beginning barre and center techniques that progress to link movement phrasing into dance sequences and choreography. The historical periods of development and the status of the art today are examined in a cultural context, which includes gender and minority influences. Performance of creative work is required.

**DANC 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**DANC 290 Ethnic Dance** 3c-01-3cr  
 Includes dance techniques from a variety of indigenous forms from Western and Eastern cultures. Presented in the historical and social context. An emphasis is given to the needs of theater production.

**DANC 351 Choreography** **3c-01-3cr**

**Prerequisites:** Three of the following introductory- or advanced-level dance classes: DANC 250, 260, 270, 280, 290, 485, or instructor permission

Introduces the necessary choreographic tools needed to manipulate dance as a medium to create dance works. Students learn and use various approaches to the choreographic process to create dance works, one of which will be presented in a public showing at the end of the semester.

**DANC 353 Dance Curriculum and Instruction** **3c-01-3cr**

**Prerequisites:** Three of the following introductory- or advanced-level dance classes: DANC 250, 260, 270, 280, 290, 485, or instructor permission

Introduces the necessary teaching skills and curriculum development needed to understand the pedagogical structure for teaching dance. Students learn the approaches to teaching that are unique to dance and will learn to design dance curriculum.

**DANC 355 Dance Production: Administration to Creation** **3c-01-3cr**

**Prerequisites:** Two of the following introductory- or advanced-level dance classes: DANC 250, 260, 270, 280, 290, 485, or instructor permission

A sequential development of the dance production process from audition to opening, focusing on the practical application to private studio and academic and professional settings. Explores the evolution of dance production and the future of dance, from both administrative and artistic perspectives, taking into consideration the constantly changing world of technology.

**DANC 481 Special Topics** **var-1-6cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**DANC 482 Independent Study** **var-1-6cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Independent study in dance may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated to a maximum of 6cr. Approval is based on academic appropriateness and availability of resources.

**DANC 485 Dance Studio** **3c-01-3cr**

**Prerequisite:** DANC 250, 260, 270, or 280 (beginning technique class taken must be the specific dance genre of the Dance Studio class offered); or by instructor permission

Further the development of the dancer at the intermediate level of a specified genre of dance. Development in dance requires the integration of both technique and artistic development. The specific genres vary from semester to semester, including modern, ballet, tap, and jazz as alternating semester options. May be repeated with a different focus each time.

**DEDU: Distributive Education****Department of Technology Support and Training****Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**DEDU 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**DEDU 331 Modern Merchandising** **3c-01-3cr**

Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, and using color, line, and design. Practice in preparing merchandise display units.

**DEDU 413 Methods and Evaluation in Marketing Education** **3c-01-3cr**

**Prerequisites:** BTED 111, DEDU 333, EDSP 102, and MKTG 320

Includes two sections of special methods and evaluation in this field. Objectives are to acquaint students with the basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Unit plans, lesson plans, demonstrations, and evaluations are prepared. Students select sections needed for certification.

**DEDU 481 Special Topics** **3c-01-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**DEDU 482 Independent Study** **var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**DVST: Developmental Studies****Department of Developmental Studies****College of Education****DVST 070 Reading Skills for College Study** **3c-01-3cr**

Assists in the development of college-level reading skills with emphasis on textbook reading. Includes literal and critical comprehension skills, vocabulary development, and reading efficiency. Carries institutional, nondegree credit, and attendance is required.

**DVST 075 Reading and Study Skills Applications** **1c-01-1cr**

Assists in the applications of college-level reading and study skills to content-area coursework. For freshman students in poor academic standing who need additional and individualized guidance in the transfer of learning strategies into day-to-day reading and coursework. Students participate in small-group instruction as well as individual appointments with the instructor. Carries institutional, nondegree credit. Attendance is required.

**DVST 090 Introduction to College Math I** **3c-01-3cr**

**Prerequisite:** May not be taken after successfully completing any course offered by the Mathematics Department without the written approval of the Department of Developmental Studies director. Reviews basic computational skills and their applications. Includes operations with whole numbers, decimals, and fractions; the concepts of ratios, proportions, and percents; basic geometric principles; and an introduction to algebra. Carries institutional, nondegree credit. Attendance is required.

**DVST 091 Developmental Mathematics, Arithmetic Operations** **1c-01-1cr**

**Prerequisite:** May not be taken after successfully completing any course offered by the Mathematics Department without written approval of the Department of Developmental Studies director. Explores the basics of counting principles, place value, arithmetic operations, exponential notation, and fractional notation through a base 8 perspective. Vocabulary, concept development, and algorithms related to the above topics are presented in a lecture format. Supplemental Instruction is provided. Carries institutional, nondegree credit. Attendance is required.

**DVST 092 Developmental Mathematics, Elemental Topics** **1c-01-1cr**

**Prerequisite:** May not be taken after successfully completing any course offered by the Mathematics Department without written approval of the Department of Developmental Studies director

Provides minimal algebra skills prior to introducing basic probability and descriptive statistics concepts as well as a review of basic geometry concepts and algorithms. Topics include identification and simplification of terms and expressions; mean, median, mode calculations; bar, line, and circle graph construction and interpretation; application and calculation of plane geometry formulae. Carries institutional, nondegree credit. Attendance is required.

**DVST 093 Developmental Mathematics, Elements of Algebra** 1c-01-1cr

**Prerequisite:** May not be taken after successfully completing any course offered by the Mathematics Department without written approval of the Department of Developmental Studies director  
Introduces algebraic concepts and algorithms with a comparison of Arithmetic algorithms to associated Algebraic algorithms. Topics include properties and operations on real numbers, simplifying expressions, order of operations, solving equations and inequalities, formulas, exponential and scientific notation, and operations on polynomials. Carries institutional, nondegree credit. Attendance is required.

**DVST 095 Introduction to College Math II** 3c-01-3cr

**Prerequisite:** May not be taken after successfully completing any course offered by the Mathematics Department, without written approval of the Department of Developmental Studies chairperson  
For students who need to develop the basic mathematical skills that are essential to success in more advanced college-level work. Content material includes computational skills of whole numbers, fractions, percents, data analysis, graphs, statistics, properties and operations on real numbers, simplifying algebraic expressions, and solving equations and inequalities. Carries institutional, nondegree credit.

**DVST 110 Introduction to Critical Reading and Thinking** 2c-01-2cr

Focuses on the development and mastery of skills related to the processes of understanding, analyzing, and assessing college-level texts and other academic readings. Synthesizes written information from a variety of sources and content areas. Note: For sections paired with specific content-area course sections, students are required to register for both courses.

**DVST 150 Introduction to Higher Education** 1c-01-1cr

Introduces the system of higher education and skills that promote effective educational planning and academic success. Orients students to the systems, resources, policies, and procedures of IUP and to the Liberal Studies curriculum. Emphasizes goal setting, decision making, self-monitoring, and time-management skills.

**DVST 160 Learning Strategies** 1c-01-1cr

Encourages students to develop and use effective and efficient study strategies on a consistent basis. Students examine academic goals and implement study strategies to help achieve those goals. Includes the topics of goal setting and self-monitoring, learning styles, test preparation and test taking, lecture and textbook note taking, time management and concentration, and general strategies for learning. Students are required to give evidence of application of the study strategies to other courses in which they are currently enrolled. Active participation in class meetings is expected.

**DVST 170 Career Exploration** 1c-01-1cr

Introduces the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers. (Cross-listed as ADVT 170. These courses may be substituted for each other and be used interchangeably for D or F repeats but may not be counted for duplicate credit.)

**DVST 201 Vocabulary Expansion** 2c-01-2cr

Assists students to develop an enriched vocabulary through learning and applying knowledge of Latin and Greek word parts and mastering the meanings and use of mature words based on those word parts. The primary emphasis is on developing the reading vocabulary, but attention is also given to students' writing, listening, and speaking vocabularies.

**DVST 250 Role of the Peer Educator: Theory, Practice, and Assessment** 1c-01-1cr

**Prerequisites:** Instructor permission

Prepares selected students for the role of a peer educator within the higher education setting. Topics include student learning and problem solving, facilitative helping and interpersonal communication, peer leadership, and assisting peers with how to effectively and efficiently succeed at the college level. (Roles include Supplemental Instruction leader, tutor, peer advisor, workshop leader.)

**ECED: Early Childhood Education**  
**Department of Professional Studies in Education**  
**College of Education and Educational Technology**

*Note:* Courses in ECED are restricted to majors with a 3.0 cumulative GPA.

**ECED 117 Family, Community, and School Relationships in a Diverse Society** 2c-01-2cr

Students develop a strong understanding and deep appreciation of the diversity among families, communities, and school cultures in the United States. Students gain the ability to locate and develop curricular materials and teaching strategies appropriate to this country's diversity.

**ECED 180 Orientation to the ECED/PreK-Grade 6 Program** 1c-01-1cr

**Prerequisite:** Declared ECED/PreK-Grade 6 major  
Familiarizes students with the professional development school communities in which they will become actively involved throughout the program. Provides an overview of the Early Childhood Education/PreK-Grade 6 teacher certification program of study. Offered Spring semester only.

**ECED 200 Introduction to Early Childhood Education** 3c-01-3cr

**Prerequisite:** ECED/EDEX majors only  
Introduces prospective teachers to the historical, sociological, and political aspects of early childhood education. An emphasis is placed on appreciating diversity in the early childhood classroom and on developing keen observation strategies to both heighten understanding of children and evaluate programs that serve them.

**ECED 221 Literature for the Young Child and Adolescent** 3c-01-3cr

**Prerequisites:** ECSP major  
A survey of literature for children from preschool to adolescence. Selection and evaluation criteria for various genres, including visual and literary elements, are the foundation. Emphasis will also be placed on multicultural literature and literature for diverse learners. Stresses motivational approaches for encouraging children's engagement with and response to literature.

**ECED 250 Language Development** 3c-01-3cr

**Prerequisites:** ECSP major  
Acquaints students with the process of children's language acquisition and development through expressive skills and language comprehension. Observation, documentation, and assessment of language development across the areas of listening, speaking, writing, drawing, and reading will be explored from both a theoretical and practical perspective.

**ECED 280 Maximizing Learning: Engaging All PreK to Grade 4 Learners** 3c-01-3cr

**Prerequisites:** ECED/EDEX major, admission to Teacher Education Step 1  
Examines competencies specific to the science of teaching, the organization and management of functional learning environments, and the design, implementation, and evaluation of developmentally appropriate learning experiences. Areas explored include models of teaching, lesson and unit planning, and creating a classroom environment that is conducive to learning.

**ECED 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ECED 310 Science Health and Safety for All PreK to Grade 4 Learners** 3c-01-3cr

**Prerequisites:** ECED/EDEX major, admission to Teacher Education Step 1

Examines strategies for teaching science and health concepts; design of lessons that integrate science, health, and safety; and learning how to become role models for children. Students develop knowledge of how to design lessons with appropriate content and methods for young children.

**ECED 351 Literacy for the Emergent Reader: PreK to Grade 1 Learners** 3c-01-3cr

**Prerequisites:** ECED/EDEX major, admission to Teacher Education Step 1

Provides early childhood teachers with various strategies, techniques, and materials related to developing early literacy in children. Current research and practical applications are interwoven to ensure a systematic coverage of the most recent methods and best practices. Focuses on the development of speaking, listening, reading, and writing skills for PreK to Grade 1 learners.

**ECED 411 Social Studies for All PreK to Grade 4 Learners** 3c-01-3cr

**Prerequisites:** ECED/EDEX major, admission to Teacher Education Step 1

An overview of social concepts related to geography, history, economics, civics and government, and citizenship. Prepares teacher candidates to offer classroom instruction to all PreK to Grade 4 learners, which builds civic competence and enables students to use skills of collaboration, decision making, and problem solving. (Offered as ELED 411 prior to 2010-2011)

**ECED 451 Literacy for the Developing Reader: Grades 2-4 Learners** 3c-01-3cr

**Prerequisites:** ECED/EDEX major, admission to Teacher Education Step 1

Provides preservice teachers with theoretical context, as well as various strategies, techniques, and materials related to teaching literacy skills, developing positive dispositions toward literacy, and fostering supportive environments for literacy development. Instructional issues, specifically related to teaching reading to young children, children with disabilities, and English language learners are investigated. Contemporary research on theoretical perspectives and best practices, as well as practical application, are interwoven to ensure a balanced approach to the most effective instructional practices. (Titled Teaching Primary Reading prior to 2010-2011)

**ECED 480 Professional Seminar: Teacher as Researcher and Advocate** 1c-01-1cr

**Prerequisites:** Admission to student teaching; enrollment limited to ECED/PreK-Grade 6 majors. Must be taken in conjunction with EDUC 441. Provides ongoing support related to candidates' work in early childhood classrooms. Students conduct a rudimentary action research project focused on literacy acquisition, engage in informed advocacy efforts for young children and the profession, and examine the theoretical and research base for multicultural and anti-bias educational practices.

**ECED 481 Special Topics** var-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Topics in education appropriate for the Early Childhood Education setting.

**ECED 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ECON: Economics**  
**Department of Economics**  
**College of Humanities and Social Sciences**

**ECON 101 Basic Economics** 3c-01-3cr

Scarcity, role of prices in determining production and the allocation of resources, business cycle analysis, policy options for reducing unemployment and inflation, economic role of government, international trade, and selected current economic problems are studied. For those who do not plan to take more than 3cr of economics. Note: May not be taken after successful completion of or concurrent registration in any other ECON course.

**ECON 121 Principles of Macroeconomics** 3c-01-3cr

Nature and methodology of economics; mixed capitalism and market economy; national income; employment theory, including economics of fiscal policy; money, banking, and Federal Reserve System; international trade and finance.

**ECON 122 Principles of Microeconomics** 3c-01-3cr

Economics of the firm; theory of consumer demand; determination of price and output in different market structures; distribution of income; economic growth.

**ECON 223 Economics of Crime** 3c-01-3cr

Economic analysis of criminal activity and its impact on the allocation of scarce resources. Uses fundamental economic models to explain crimes against people, property crime, "victimless crime," and organized crime.

**ECON 239 Economics of Sports** 3c-01-3cr

Student gains a better understanding of the sports industry. Explores how economics applies to both amateur and professional sports. Addresses a variety of areas, including labor issues in sports (e.g., free agency, reserve clause, unions, strikes, and discrimination), the legal relationship between sports and government (e.g., Title IX and antitrust law), and public finance issues (e.g., location of sports franchises and public ownership of stadiums and arenas). Guest speakers and a multimedia approach are used.

**ECON 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ECON 325 Monetary Economics I** 3c-01-3cr

**Prerequisites:** ECON 121, 122  
Organization, operation, and economic significance of U.S. monetary institutions; commercial banks and Federal Reserve System; survey of monetary theory and policy; mechanism of international payments.

**ECON 326 Monetary Economics II** 3c-01-3cr

**Prerequisite:** ECON 325 or instructor permission  
A detailed study of monetary theory; tasks of central banking; principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy.

**ECON 330 Labor Economics** 3c-01-3cr

**Prerequisites:** ECON 121, 122  
History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory; wage determination; current labor problems.

**ECON 331 Industrial Organization** 3c-01-3cr

**Prerequisite:** ECON 122 or instructor permission  
Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

**ECON 332 Government and Business** 3c-01-3cr

**Prerequisite:** ECON 122 or instructor permission  
An analysis of the antitrust laws focusing on the maintenance of competition, the prohibition of unfair business conduct, and the achievement of desirable economic performance.

<b>ECON 333 Regulation of Industry</b>	<b>3c-01-3cr</b>	<b>ECON 361 Environmental Economics</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121, 122 or instructor permission		<b>Prerequisite:</b> ECON 101 or 122	
Examines the theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in the U.S.		An examination of economic costs and benefits of environmental control and modification. Techniques of economic analysis are used to understand economic aspects of environmental problems and contribute toward their solution.	
<b>ECON 334 Managerial Economics</b>	<b>3c-01-3cr</b>	<b>ECON 365 Economics of Tourism</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121, 122, MATH 121 or equivalent		<b>Prerequisite:</b> ECON 101, 121, or 122; or instructor permission	
Applications of economic theory using algebra, elementary statistics, and calculus to solve managerial optimization problems including problems of forecasting and risk.		Examines the importance of tourism and the travel industry. Examines economic applications to tourism and each of the segments of the travel industry, including transportation, accommodations, food, and attractions and entertainment from both a domestic and international perspective.	
<b>ECON 335 Public Finance</b>	<b>3c-01-3cr</b>	<b>ECON 369 Contemporary Economic Issues</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121, 122 or instructor permission		<b>Prerequisite:</b> ECON 101 or 122	
Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact upon economy.		A rigorous but nontechnical analysis of a variety of economic problems and a formulation and evaluation of possible corrective policies.	
<b>ECON 336 State and Local Finance</b>	<b>3c-01-3cr</b>	<b>ECON 371 Economics of Labor Legislation</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> ECON 122 or instructor permission		<b>Prerequisite:</b> ECON 330 or instructor permission	
An analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems; intergovernmental fiscal relations.		Economic background and effects of governmental regulation of labor relations, emphasizing a detailed examination of National Labor Relations Act as amended.	
<b>ECON 339 Economic Development I</b>	<b>3c-01-3cr</b>	<b>ECON 372 Economics of Wages and Employment</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121, 122		<b>Prerequisite:</b> ECON 330 or instructor permission	
Theory of growth; theory of economic development of underdeveloped countries.		An analysis of wages and employment under various market structures. Also, analysis of the impact of labor market forces on wages, prices, and distributive shares.	
<b>ECON 343 Economic History of the United States</b>	<b>3c-01-3cr</b>	<b>ECON 373 Economics of Human Resources</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> ECON 101 or 121 or 122		<b>Prerequisite:</b> ECON 101 or 122	
Applications of economic theory and models of economic development to the main patterns of U.S. postrevolutionary growth; emphasizes the history of economic development as a laboratory for testing economic hypotheses.		An inquiry into economic demographics and related factors affecting growth, structure, and distribution of an economy's labor force into different occupations.	
<b>ECON 345 International Trade</b>	<b>3c-01-3cr</b>	<b>ECON 383 Urban/Regional Economics</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121 and 122 or instructor permission		<b>Prerequisites:</b> ECON 121 and 122	
A study of the microeconomic segment of international specialization and exchange, including theories of international trade and their application to commercial policies, historical survey and examination of current problems of international trade, and the institutional setting of international trade.		Location theory, land use patterns, urban economic/regional growth change, and urban economic problems and policies.	
<b>ECON 346 International Finance</b>	<b>3c-01-3cr</b>	<b>ECON 421 Macroeconomic Analysis</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 121 and 122 or instructor permission		<b>Prerequisites:</b> ECON 121, 122 or instructor permission	
A study of the macroeconomic segment of international specialization and exchange, including analysis of balance of payments, exchange rates, and the mechanism of international economic and monetary adjustments; international macroeconomic policy; historical survey and examination of current international financial problems; and the institutional setting of international payments.		Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.	
<b>ECON 350 Comparative Economic Systems</b>	<b>3c-01-3cr</b>	<b>ECON 422 Microeconomic Analysis</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> ECON 101 or 121 or 122		<b>Prerequisites:</b> ECON 121, 122, MATH 121 or equivalent	
An evaluation of premises, practices, institutions, and performance of capitalist, socialist, and mixed economies using economic theory and measurement.		Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.	
<b>ECON 355 Statistics for Economists</b>	<b>3c-01-3cr</b>	<b>ECON 456 Advanced Econometrics</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> ECON 121 or 122 or instructor permission		<b>Prerequisite:</b> ECON 356 or equivalent or instructor permission	
An introduction to economic statistics, including frequency distributions, probability, distributions of random variables, functions of random variables, and tests of economic hypotheses.		Provides a more thorough understanding of the theory and practice of econometrics introduced in ECON 356. Students increase their proficiency in econometric analysis and improve their research skills by extending their research agendas begun in ECON 356 and through exposure to the scholarly literature. Students learn about a variety of topics related to regression analysis, including violations of the Classical assumptions, extensions of the basic regression model, and advanced techniques.	
<b>ECON 356 Introduction to Econometrics</b>	<b>3c-01-3cr</b>	<b>ECON 480 Seminar</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ECON 355 or its equivalent or instructor permission		<b>Prerequisite:</b> Instructor permission	
An introduction to econometrics, including linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.		A seminar in selected economic issues or problems.	
<b>ECON 360 Economics of Health Services</b>	<b>3c-01-3cr</b>	<b>ECON 481 Special Topics</b>	<b>var-1-3cr</b>
<b>Prerequisite:</b> ECON 101 or 122 or instructor permission		<b>Prerequisite:</b> Instructor permission	
An analysis of the allocation of resources in the health sector using demand and supply techniques. Pricing and output decisions by physicians, hospitals, and other health agencies are considered along with other current policy issues.		Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.	

**ECON 482 Independent Study** var-1-6cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ECON 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**ECON 493 Internship in Economics** var-2-12cr

**Prerequisites:** ECON major who has completed at least 12cr in ECON and who has at least a 2.5 GPA in the major and in all coursework  
Provides on-the-job experience in economics positions with private and governmental employers. The student is also required to complete related academic work in the form of papers and selected readings. Number of credits earned depends upon the nature of the job and amount of time involved in internship. A maximum of 6cr earned in this course may be counted toward the 30cr in economics requirement for ECON majors.

**ECSP: Early Childhood/Special Education**  
**College of Education and Educational Technology**
**ECSP 112 Growth and Development: Typical and Atypical** 3c-01-3cr

**Prerequisites:** EDEX 111, PSYC 101  
Presents the foundations, theories, and research findings on human growth from conception, including basic embryogenesis, up to early adolescence. Examines various aspects of child development with an emphasis on biological, cultural, educational, and parental influences that shape children, as well as selective examples of typical and atypical cognitive, physical, and social-emotional development. (Offered as EDEX 112 prior to 2010-2011)

**ECSP 314 Creative Experiences and Play for All PreK to Grade 4 Learners** 3c-01-3cr

**Prerequisite:** ECED/EDEX major  
Provides teacher candidates with the knowledge and skills necessary to incorporate creative music, art, drama, movement, and play activities into a comprehensive early childhood inclusive curriculum. Integration of creative experiences and play will enhance and encourage the development of all PreK to Grade 4 learners is emphasized, as is the historical, theoretical, and research base for the integration of play and creative experiences into a fully inclusive classroom. (Offered as ECED 314 prior to 2010-2011)

**ECSP 340 Introduction to Classroom and Behavior Management** 3c-01-3cr

**Prerequisites:** ECSP major  
An overview of classroom organization and management, along with systematic behavior change techniques required for effective teaching and enhanced student learning for all children in Pre-K through Grades 4 and students identified with special needs or at-risk through Grade 8. The research-based classroom management and behavioral techniques can be used to create a positive learning environment for all students in an inclusive setting.

**ECSP 440 Professional Seminar: Teacher as Researcher and Advocate for All PreK to Grade 4 Learners** 2c-01-2cr

**Prerequisites:** ECED/EDEX major, successful completion of Teacher Education Step 1, admission to Teacher Education Step 2, concurrent enrollment in EDUC 461, 471  
Provides support in a teacher candidate's ongoing professional development. Emphasizes guidelines for professional etiquette, ethical behavior, professional practice, and effective interpersonal relations with teachers, paraprofessionals, school and agency personnel, parents, and students. Facilitates work in engaging in informed advocacy efforts on behalf of children and the profession and examining the theoretical and research base for classroom practices.

**EDEX: Education of Exceptional Persons**  
**Department of Special Education and Clinical Services**  
**College of Education and Educational Technology**
**EDEX 103 Special Education Technology** 3c-01-3cr

Addresses the use of assistive technology in the classroom in areas of communication, mobility, education, recreation, vocation, independence, and therapy/rehabilitation. The emphasis is on developing awareness of the diversity of assistive technology currently available for individuals with disabilities. Specific applications of assistive technology devices, which improve and maintain the functioning capabilities of individuals with disabilities, are presented. Students engage in independent learning activities and receive information that enables them to gather information about assistive technology devices, companies, and related services.

**EDEX 110 Introduction to Special Needs Pre-K to Grade 8** 3c-01-3cr

**Prerequisite:** ESCP majors only  
Surveys characteristics, needs, problems, and behavior patterns of any child who deviates sufficiently from typical to be considered disabled or at risk for disability. Consideration to children who fall intellectually both above and below average, those who are disabled visually, acoustically, behaviorally, orthopedically, neurologically, or in respect to speech patterns. Focuses on children from birth to adolescence.

**EDEX 111 Introduction to Exceptional Persons** 3c-01-3cr

**Prerequisite:** Department majors, dual majors, minors, and official incoming transfers only  
Surveys characteristics, needs, problems, and behavior patterns of individuals who have disabilities or who are gifted. Students develop an understanding and knowledge of individuals with sensory, behavioral, physical, cognitive, language, and learning disabilities. Acquaints students with history and legislative bases of special education.

**EDEX 221 Methods of Teaching Mathematics to Persons with Disabilities** 3c-01-3cr

**Prerequisites:** MATH 151, EDEX 111  
Emphasizes recent developments in elementary curriculum and instructional techniques for developing concepts; implications of recent resource developments and materials helpful to the prospective special education teacher. Also emphasizes methods of helping children learn mathematical concepts through physical activity and ways to adapt regular classroom materials to meet needs and abilities of slow and disabled learners.

**EDEX 222 Methods of Teaching Reading to Persons with Disabilities** 3c-01-3cr

**Prerequisite:** Sophomore status or above  
Focuses on basic concepts of developmental reading instruction and systematic coverage of methods of teaching reading from readiness stages through eighth grade. Reviews research in the field, including current issues, trends, practices, and services. Additionally, issues and practices related to students who are English language learners are examined. Throughout the course, a variety of instructional approaches (e.g., cooperative learning, simulations, role-playing, co-teaching, and whole-group instruction) are used to facilitate the acquisition of new skills. Students also become familiar with software useful for reading instruction.

**EDEX 231 Methods of Teaching Content Area Subjects to Persons with Disabilities** 3c-01-3cr

**Prerequisites:** EDEX 111, 3.0 GPA  
Presents methods for teaching science and social studies to the mentally and/or physically handicapped. Scope and sequence of content, as well as evaluative techniques for each content area, are studied. Integration of other content areas and skill areas is stressed. Also stresses teaching in both resource room and less restrictive environments.

**EDEX 300 Education of Students with Disabilities in Inclusive Elementary Classrooms** 2c-01-2cr

**Prerequisites:** ECED/PreK-Grade 6 and ELED majors only; to be taken only during the semester of the designated methods courses  
Examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. Emphasizes special education, particularly the legal rights of

students with exceptionalities and their parents, and the responsibilities of educators in addressing those rights. Examines the differential impact of student characteristics on elementary-level school performance and instructional methods proven to be effective in educating students with disabilities and learning style differences.

**EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings** 2c-01-2cr

**Prerequisite:** Secondary Education majors and others who will be certified to teach content from K-12

**Recommendation:** Strongly recommended that this course be taken in the same semester as the designated methods course

Examines the issues associated with education of students with diverse learning needs, particularly those with disabilities or who are at risk for school failure. Emphasizes special education, particularly the legal rights of students with exceptionalities and their parents, and the responsibilities of educators in addressing those rights. Examines the differential impact of student characteristics on secondary-level school performance and instructional methods proven to be effective in educating students with disabilities and learning style differences.

**EDEX 321 Methods of Teaching Language Arts to Persons with Disabilities** 3c-01-3cr

**Prerequisites:** EDEX 111, 222, SPLP 254, 3.0 GPA

A review of typical and atypical characteristics of learners with disabilities in relationship to the language arts. Examines issues related to the preparation and execution of units of instruction in language arts for persons with mental and/or physical disabilities as well as issues and practices related to students who are English language learners. Stresses the use of diagnostic and prescriptive approaches to the integration of language arts across the curriculum with an emphasis on reading.

**EDEX 323 Instruction of English Language Learners with Special Needs** 2c-01-2cr

**Prerequisites:** Admission to Teacher Certification

Provides future teachers with the necessary methods to meet the needs of English language learners with special needs in the classroom. Based upon knowledge of the behaviors, beliefs, and attitudes of a multicultural approach to learning, instructional methods, appropriate assessment and language acquisition techniques, and use of varied resources are included.

**EDEX 340 Introduction to Behavior Management in Special Education** 3c-01-3cr

**Prerequisites:** EDEX 111, 112, PSYC 101

An overview of systematic behavioral change techniques for use with students in a variety of special education settings, including integrated, resource, self-contained, special school, and residential. Emphasizes a case analysis approach to creating and evaluating behavioral changes for students with mild to severe disabilities.

**EDEX 409 Instructional Strategies for Gifted Learners** 3c-01-3cr

**Prerequisite:** EDSP 102

Participants explore issues of excellence and equity in gifted education, examine the unique characteristics of gifted learners, become oriented to the differentiation process, explore predispositions and behaviors of effective gifted teachers, and become acquainted with specific strategies for meeting the learning needs of gifted students.

**EDEX 415 Preschool Education for Children with Disabilities** 3c-01-3cr

**Prerequisites:** Departmental permission, 3.0 GPA

Provides information on assessment, intervention strategies, curriculum, and prescriptive planning for preschool children with disabilities. For departmental majors who are specifically interested in early childhood education, as an elective for other interested students in related fields, and as a priority course for Early Childhood Education/PreK-Grade 6 majors.

**EDEX 416 Education of Persons with Emotional or Behavioral Disorders** 3c-01-3cr

**Prerequisites:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX

Focuses on major theoretical positions regarding etiology of emotional and behavioral disorders, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

**EDEX 417 Education of Persons with Mental Retardation or Developmental Disabilities** 3c-01-3cr

**Prerequisites:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX

Focuses on major theoretical positions regarding etiology of mental retardation and developmental disabilities, including autism. Discusses definition, identification, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

**EDEX 418 Education of Persons with Physical or Multiple Disabilities** 3c-01-3cr

**Prerequisites:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX

Focuses on major theoretical positions regarding etiology of a wide and diverse range of physical/multiple disabilities, the definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

**EDEX 419 Education of Persons with Brain Injuries or Learning Disabilities** 3c-01-3cr

**Prerequisites:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX

Focuses on major theoretical positions regarding etiology of neurological and learning disabilities, definition and identification of the population, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

**EDEX 425 Methods and Curriculum (Mild-Moderate Disabilities)** 3c-01-3cr

**Prerequisites:** EDEX 221, 222, 231, 321, 340, successful completion of Step 1 of the 3-Step Process

An in-depth examination of assessment methods, strategies, and curricula. Emphasizes assessment methods and strategies used in a variety of service models that serve elementary- and secondary-level students with learning disabilities, behavioral disorders, mild mental retardation, and high-function autism.

**EDEX 435 Methods and Curriculum (Severe-Profound Disabilities)** 3c-01-3cr

**Prerequisites:** Successful completion of Step 1 of the 3-Step Process, ECSP and Secondary Content/Grades 7-12 Special Education Certification majors only

Emphasizes methods designed to facilitate the development of an integrated, functional, and community-based curriculum that prepares students for participation in a wide variety of postschool environments.

**EDEX 440 Ethical and Professional Behavior** 1c-01-1cr

**Prerequisites:** Departmental permission, successful completion of Step 1 of the 3-Step Process

Emphasizes ethical and professional behavior for student teachers and professional employees. Possibilities for and methods of initiating and profiting from postbaccalaureate study are indicated. Student teachers are required to complete and present a curriculum book regarding each student-teaching experience.

**EDEX 458 Transition for Youth with Disabilities** 3c-01-3cr

Develops competencies in the skills necessary to help students with disabilities make a successful transition from school to adult life. Transition service elements are, at a minimum, postsecondary education and training, employment, and community living. For students with disabilities, successful outcomes require self-determination and other personal-social characteristics that must be identified and supported by the transition team throughout the entire transition planning process.

**EDEX 460 Family Perspectives on Disability** 3c-01-3cr

**Prerequisite:** PSYC 101

For any major who will work with families and youth with disabilities. By understanding families as competent and resourceful systems, students critically examine ways to collaborate effectively with family members. Focuses on legal and philosophical bases for supporting families in making important decisions affecting the education and care of their children.

**EDEX 469 Education of Persons with Emotional/Behavioral Disorders, Learning Disabilities or Brain Injury** 3c-01-3cr

**Prerequisite:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX  
Focuses on major theoretical positions regarding etiology of emotional/behavioral disorders, learning disabilities, and brain injury; definition and identification of the populations; and educational approaches. Reviews research in the field, including current issues, trends, educational practices, and services. A variety of instructional approaches (e.g., cooperative learning, simulations, role-playing) are used to facilitate acquisition of new knowledge and skills. Students are expected to develop presentations using Internet resources and electronic format.

**EDEX 478 Education of Persons with Mental Retardation/Developmental Disabilities and Physical/Multiple Disabilities** 3c-01-3cr

**Prerequisite:** Successful completion of Step 1 of the 3-Step Process and a dual major in Disability Services/Sociology or a minor in EDEX  
Focuses on major theoretical positions regarding etiology of mental retardation, developmental disabilities, a wide and diverse range of physical/multiple disabilities, and other health impairments. Discusses definitions, population characteristics, and educational approaches. Reviews research in the field, including current issues, trends, practices, and services.

**EDEX 480 Seminar in Special Education** var-1-3cr

**Prerequisite:** Departmental permission  
The pursuit of knowledge regarding specific concerns of the exceptional which are not ordinarily considered in such detail during regular classroom instruction. Students are expected to submit a written proposal regarding their desire for study at the time permission for enrollment is sought. With permission, the course may be repeated for credit.

**EDEX 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**EDEX 493 Internship/Field Training** var-12cr

Allows the intern to demonstrate competencies working in a public or private agency providing educational/rehabilitation services. This may include, but not be limited to, writing and analyzing comprehensive evaluation reports, counseling individuals with disabilities, understanding agency and/or service delivery responsibilities and limitations, referral and follow-up processes, and use of various assessment approaches in evaluating an individual's capacity to function independently in a broad range of community settings.

**EDHL: Education of Deaf and Hard-of-Hearing Persons  
Department of Special Education and Clinical Services  
College of Education and Educational Technology**

**EDHL 114 Introduction to Deaf and Hard-of-Hearing Persons** 3c-01-3cr

Deals with the different approaches used in teaching students who are deaf or hard of hearing—manual language, oral language, and total communication. The historical background of each approach is presented with its strengths and weaknesses. Criteria for the use of each approach are established in consideration of degree of loss exhibited by the pupil, the age of onset, and the social and psychological implications.

**EDHL 115 Introduction to American Sign Language** 1c-11-1cr

Development of manual dexterity and fluency using fingerspelling. Acquisition of basic American Sign Language syntax, semantics, vocabulary,

and pragmatics. Practice in acquiring general information from a signed message and conversing informally on commonly used topics.

**EDHL 215 Intermediate American Sign Language** 2c-11-2cr

**Prerequisites:** EDHL 115, 3.0 GPA required for EDHL majors, 2.8 GPA for EDHL minors

Emphasizes vocabulary expansion, comprehension of signed information, and development of fluency in conveying a message in American Sign Language. Focuses on idiom-like expressions, number systems, rules, grammar, and conversational language. Total immersion approach is used.

**EDHL 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EDHL 307 Speech for Deaf and Hard-of-Hearing Persons** 3c-01-3cr

**Prerequisites:** EDHL 114, 3.0 GPA  
Techniques for developing, diagnosing, analyzing, and correcting the speech and voice problems of persons who are deaf or hard of hearing. Includes lecture, demonstration, and special projects.

**EDHL 308 Language for Deaf and Hard-of-Hearing and English Language Learners** 3c-01-3cr

**Prerequisites:** EDHL 114, admission to Step 1 of the 3-Step Process  
Reviews normal language development birth through twelve years and compares it to the language development of children with various types and degrees of hearing loss. Emphasizes specific strategies focused on the assessment and development of English language skills in English language learners (ELL) and Deaf and Hard-of-Hearing children (D/HH).

**EDHL 314 Deaf Culture** 3c-01-3cr

A survey of sociocultural factors that define deaf persons as members of a cultural minority. Includes an examination of deaf history, a review of contributions of deaf persons to American society, and hearing attitudes toward sign language and deaf culture.

**EDHL 317 Sign Language in Educational Settings** 2c-11-2cr

**Prerequisites:** EDHL 115, 215  
Focuses on the use of sign language in the schools. Includes the adaptation of American Sign Language to Manually Coded English and basic principles of interpreting in an educational setting for future teachers of deaf and hard-of-hearing students. Extensive practice is required.

**EDHL 329 Teaching Collaborative Practicum I** 1c-11-1cr

**Prerequisites:** EDHL 114, 115, 215, 308, 360, 361; EDUC 242, admission to Step 1 of the 3-Step Process  
Provides the opportunity to work in either a one-to-one or small group instructional setting with K-12 students who are deaf or hard-of-hearing. Emphasizes lesson planning, academic instruction, curriculum-based assessment, progress monitoring, collaboration, professional report writing, and reflection.

**EDHL 330 Teaching Collaborative Practicum II** 2c-11-2cr

**Prerequisites:** EDHL 114, 115, 215, 308, 360, 361; EDUC 242; admission to Step 1 of the 3-Step Process  
Provides the opportunity to work with either a one-to-one or small group instructional setting with K-12 students who are deaf or hard of hearing. Lesson planning, academic instruction, response to instruction, curriculum-based assessment, progress monitoring, collaboration, peer monitoring, professional report writing, and reflection are emphasized.

**EDHL 360 General Methodology for Education of Deaf and Hard-of-Hearing Persons I** 3c-01-3cr

**Prerequisites:** EDHL 114, 115; admission to Step 1 of the 3-Step Process  
Provides systematic coverage of the basic procedures for maintaining legal educational mandates (IDEA) and teaching curriculum subjects. Included are the development of an Evaluation Report and Individualized Education Plan and regular and adaptive methods of instruction for the teaching of mathematics and science. The Pennsylvania K-12 Academic Standards are used to guide the construction of lessons that are developmentally appro-



appropriate and follow current best practices in education. Multiple projects and teaching activities are involved.

**EDHL 361 General Methodology for Education of Deaf and Hard-of-Hearing Persons II** 3c-01-3cr

**Prerequisites:** EDHL 114, 115; admission to Step 1 of the 3-Step Process  
Provides systematic coverage of teaching curriculum subjects; includes technology-enhanced development of lesson plans and unit plans as well as general and adaptive methods of instruction for teaching language arts (reading-writing-listening-speaking/signing), social studies, and health/physical education. The Pennsylvania K-12 Academic Standards are used to guide the construction of lessons that are developmentally appropriate and follow current best practices in education. This is the second part of a two-part general methods course sequence. There is one field trip planned.

**EDHL 415 ASL Pedagogy** 1c-11-1cr

**Prerequisites:** EDHL 114, 115, 215, 315, 316, 3.0 GPA  
Studies the evolution of signs; dialectical sign systems. Analysis and comparison of the linguistic similarities/differences of various sign languages. Direct translation of written or spoken information on specific topics using American Sign Language or Signed English. Practice using conversation on both a social and academic level.

**EDHL 451 Reading for Deaf, Hard-of-Hearing, and English Language Learners** 3c-01-3cr

**Prerequisites:** EDHL 308; admission to Step 1 of the 3-Step Process  
A writing-intensive course that presents concepts of reading instruction and systematic coverage of the methods of teaching reading to all students. Discussion about and adaptation for students who are deaf or hard of hearing and English language learners from readiness stages through upper school content reading are emphasized.

**EDHL 465 Parent/Preschool Programs for Deaf and Hard-of-Hearing Children** 3c-01-3cr

**Prerequisites:** EDHL 114, 308; admission to Step 1 of the 3-Step Process  
Developing home/preschool programs for parents and infants who are deaf or hard of hearing (0-3 years). Teaching speech, language, speechreading, use of residual hearing, and developing readiness skills at the preschool level. An additional emphasis on early childhood aesthetics and adaptations for English language learners at the preschool level is also included.

**EDHL 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**EDHL 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EDSP: Educational and School Psychology**  
**Department of Educational and School Psychology**  
**College of Education and Educational Technology**

**EDSP 102 Educational Psychology** 3c-01-3cr

Promotes an understanding of the principles of psychology governing human behavior, with particular emphasis on the relation to the learner, learning process, and learning situation in an educational environment.

**EDSP 257 Understanding and Taking Standardized Tests** 1c-01-1cr

For teacher education majors to promote their understanding of the principles of successfully mastering standardized tests such as the Praxis I Exam. A particular emphasis on practicing the skills necessary for understanding the assessments. Highlights the application of skill-based decision making in preparing for test taking. Also discusses implications of individual differences and variables that affect performance on standardized tests.

**EDSP 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EDSP 373 Psychology of Adolescent Education** 3c-01-3cr

**Prerequisite:** EDSP 102  
A study of significant characteristics, behavior, and educational and social problems of adolescents.

**EDSP 376 Behavior Problems** 3c-01-3cr

**Prerequisite:** EDSP 102  
An examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

**EDSP 378 Learning** 3c-01-3cr

**Prerequisite:** EDSP 102  
Explores learning theories and educational application in the classroom.

**EDSP 423 Educational Programming for Gifted Learners** 3c-01-3cr

Teaches educators the characteristics of various service delivery options in K-12 gifted education programs and assists them in determining which options are best for which types of gifted learners. Examines how the concept of giftedness has changed, and how these changes have influenced service delivery. Students explore methods of modifying classroom instruction for gifted learners and learn which methods fit best with the various service delivery options. The importance of a systemic approach, that is, the reciprocal impact of students, schools, and families on each other, is an underlying theme.

**EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures** 3c-01-3cr

**Prerequisites:** PSYC 101 or permission; admission to Teacher Certification  
Acquaints students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of learners in elementary and secondary schools, including interpretation of standardized test information.

**EDSP 481 Special Topics in Educational Psychology** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**EDSP 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EDSP 493 Educational Psychology Honors Internship** 1cr

**Prerequisites:** EDSP 102 and admission to Honors Track  
Provides direct experience in one of three centers located in the Educational and School Psychology Department; centers include the Child Study Center and the Center for Rural Gifted Education. Other centers located within the College of Education and Educational Technology or the Teacher Education Program may be considered if approved by the Honors Track director. May be repeated.

**EDSP 499 Independent Study** var-1-3cr

**EDUC: Education**  
**College of Education and Educational Technology**

**EDUC 242 Pre-Student Teaching Clinical Experience I** var-1cr

**Prerequisite:** Admission to teacher certification

Introduces specific competencies that relate to individual major fields of teaching and university-based instruction, as well as observation/participation in a PreK-Grade 12 field experience. These competencies incorporate strategies and techniques for addressing the needs of all students, including those with special and English language learning needs.

**EDUC 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**EDUC 342 Pre-Student Teaching Clinical Experience II** var-1cr

**Prerequisites:** EDUC 242, admission to junior standing  
Continues to develop and refine competencies that relate to individual major fields of teaching through university-based instruction as well as participation and teaching in a PreK-Grade 12 school field experience. Also incorporates strategies and techniques for the delivery of instruction to all students, including those with special and English language learning needs.

**EDUC 389 Field Experience Intervention** 3c-01-3cr

**Prerequisites:** Permission of department and instructor; ELED or ECED/PreK-Grade 6 major  
Assists in achieving the competencies within the major necessary for performance in student teaching. Teaching skills are developed through one-on-one tutoring and a field experience. Each student works in collaboration with the instructor to develop a personal learning contract that provides a means for demonstrating those competencies identified by the instructor and student. Students are expected to show commitment to self-development and teaching. Only offered on a pass/fail basis.

**EDUC 408 Reading in the Content Areas** 3c-01-3cr

**Prerequisite:** ELED 222  
Problems related to teaching students reading and study skills specifically needed in each of the subject areas at the elementary level. Content teachers learn how to develop students' competence in these skills as part of their regular classroom instruction.

**EDUC 415 Computers in the School Curriculum** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101 or instructor permission  
Uses a variety of computer software including word processing, record management programs, and simulation programs. Emphasizes the application of computer programs within the K-12 school curriculum.

**EDUC 421 Student Teaching** var-5-6cr

**Prerequisite:** Admission to Student Teaching  
An experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

**EDUC 423 Professional Practicum, Including School Law** var-3cr

A series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years. (ELED majors only)

**EDUC 431 Student Teaching in Family and Consumer Sciences** var-6cr

**Prerequisite:** Admission to Student Teaching  
An experience in teaching family and consumer sciences at the secondary level.

**EDUC 441 Student Teaching** var-5-12cr

**Prerequisite:** Admission to Student Teaching, successful completion of Step 2 of Teacher Education 3-Step Process  
An experience in teaching at the elementary or secondary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

**EDUC 442 School Law** 1c-01-1cr

Required of all teacher certification students. Includes an overview of legal principles that apply to special areas of education. Must be taken prior to student teaching.

**EDUC 451 Teaching Science in the Secondary School** 2c-21-3cr

**Prerequisite:** Admission to Student Teaching  
Provides the background to help science majors meet the problems of teaching science. Various inquiry approaches useful in meeting the objectives of a contemporary science class, including special needs students and English-language learners, are taught and exemplified.

**EDUC 452 Teaching of English and Communication in the Secondary School** 3c-01-3cr

**Prerequisites:** ENGL 314, 323, 380 and admission to Student Teaching  
A prerequisite to student teaching in English. Introduces current professional practices in the teaching of English and communications in high school.

**EDUC 453 Teaching of Foreign Languages in the Secondary School** 3c-01-3cr

**Prerequisites:** Grade of C or better in SPAN 390 or FRNC/GRMN 390; instructor permission  
Helps students develop an understanding of current theories of foreign language learning through exploration of relevant research. Students read about and discuss the implications of key research for teaching in secondary school classrooms. Opportunities are provided to use the theoretical base to design and present classroom lessons and to reflect on the effectiveness of their teaching. Special attention is given to designing performance-based language assessments and to adapting instruction to address the special needs of learners. Taught Fall semester only.

**EDUC 455 Teaching of Social Studies in Secondary Schools** 3c-01-3cr

**Prerequisite:** Admission to Student Teaching  
A study of modern methods and techniques for teaching social studies and of current curricula in social studies.

**EDUC 456 Teaching Mathematics in the Secondary Schools** 3c-01-3cr

**Prerequisites:** Admission to Teacher Education Program, a declared major in Mathematics Education, and EDUC 242 with a "C" or better  
A study of curricula, standards, methods, and techniques for teaching mathematics in the secondary schools.

**EDUC 461 Student Teaching** 5c-01-5cr

**Prerequisites:** Admission to Student Teaching, successful completion of Teacher Education Step 2  
An experience in teaching students with special needs at the PreK to Grade 8 level; coordination and visitation by a university faculty member with daily supervision by a cooperating teacher.

**EDUC 462 Issues and Innovations in Education** 3c-01-3cr

A study of issues and innovations which influenced education is included. Educational innovations and issues which deal with curriculum, school organization, and materials of instruction are examined.

**EDUC 471 Student Teaching** 5c-01-5cr

**Prerequisites:** Admission to Student Teaching, successful completion of Teacher Education Step 2  
An experience in teaching students with special needs at the PreK to Grade 8 level; coordination and visitation by a university faculty member with daily supervision by a cooperating teacher.

**EDUC 481 Special Topics** 3c-01-3cr

**Prerequisite:** By permission only  
Provides an opportunity to investigate in depth an area of education under professional supervision.

**EDUC 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**EDUC 495 International Study Tour in Education** var-3cr

A study of various peoples through their cultural settings and educational systems; on-site visitation to selected schools and other social agencies and institutions; seminars with school officials and directed readings.

**EDUC 499 Multicultural/Multiethnic Education** 2c-01-2cr

**Prerequisite:** One methods course must be taken prior to, or concurrently with, EDUC 499

Provides an understanding and appreciation of cultural diversity in the United States. Students gain the ability to locate and develop curricular materials appropriate to this country's diversity.

**ELED: Elementary Education****Department of Professional Studies in Education  
College of Education and Educational Technology**

*Note:* Courses in ELED are restricted to majors, except with departmental permission.

**ELED 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ELED 312 Teaching of Elementary Science** 2c-01-2cr

Emphasizes science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Offered on the junior block only.

**ELED 313 Teaching Mathematics in the Elementary School** 3c-01-3cr

**Prerequisites:** MATH 152, ECED 280

Examines contemporary curriculum and methods of instruction used in elementary school mathematics (Grades 2-4). Students become acquainted with books, materials, and other resources helpful to prospective teachers. Activities include experiences in teaching elementary school mathematics.

**ELED 314 Teaching of Health and Physical Education** 2c-01-2cr

Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary school child. Teaching of health in elementary school is emphasized, including methods, materials, and lesson planning.

**ELED 351 Creative Activities in the Elementary School** 3c-01-3cr

Provides a wide range of creative experiences in fields of art, crafts, music, rhythmic, dramatics, and games in elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

**ELED 357 Pedagogy II** 3c-01-3cr

**Prerequisite:** Junior status

Principles based on classroom experience. Instruction includes classroom management skills, integration of computers in the elementary curriculum, contemporary issues in education, the role of research in elementary classroom teaching, and teacher professionalism during and after field experiences. (Writing-intensive course)

**ELED 425 Language Arts Across the Curriculum** 3c-01-3cr

**Prerequisite:** ELED 222

Emphasizes the view that the art of communication is an interrelated process, and the task of classroom teachers is not only integrating the language arts among themselves but also integrating them throughout the entire curriculum. Presents techniques for teaching oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics. Special emphasis given to recent trends and research. (Writing-intensive course)

**ELED 481 Special Topics** var-3cr

**Prerequisite:** Approval of instructor and department

Topics in education appropriate for the Elementary Education setting.

**ELED 482 Independent Study** var-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ELR: Employment and Labor Relations****Department of Employment and Labor Relations  
College of Health and Human Services****ELR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**ELR 426 Case Studies in Employment Relations** 3c-01-3cr

An in-depth study of daily employment relationships in a variety of organizational settings through utilization of case study technique. Focuses on a problem-solving approach to the legal and contract administration components of the employment relationship.

**ELR 480 Principles and Practices of Collective Bargaining** 3c-01-3cr

An examination of the historical, legal, and functional parameters of collective bargaining. Topics include the organizing process, negotiations, contract administration, dispute resolution, and public-sector labor relations.

**ELR 481 Special Topics in Employment Relations** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**ELR 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ELR 499 Independent Study** var-1-3cr

Independent reading and research under the direction of a faculty member.

**ENGL: English****Department of English****College of Humanities and Social Sciences****ENGL 100 Basic Writing** 3c-01-3cr

The student develops the basic English skills necessary for clear and effective communication. Restricted to freshmen whose placement testing essay or portfolio score is a four or under. Does not meet General Education English or Liberal Studies writing requirements.

**ENGL 101 College Writing** 3c-var-4cr

**Prerequisite:** ENGL 100, where required by placement testing

Normally to be taken the first semester at IUP. Uses readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric and other approaches to composition. Seven theme-length expository papers (or the equivalent) are written, in addition to shorter exercises and a written final examination.

**ENGL 121 Humanities Literature** 3c-01-3cr

**Prerequisite:** ENGL 101

Introduces literature of various genres through a careful analysis of poetry, fiction, and drama. Includes literature of various time periods, nationalities, and minorities.

- ENGL 122 Introduction to English Studies** **3c-01-3cr**  
**Prerequisites:** ENGL major or minor; minimum grade of C in ENGL 101  
 Introduces students to English Studies by acquainting them with the critical approaches appropriate to the varied subject areas of the discipline. The assumptions and methods of these approaches will be considered, especially in the interpretation of literature. At the conclusion, students will be able to critically analyze texts and demonstrate those skills in discussion and writing. Required of all ENGL majors.
- ENGL 150 English for Foreign Students** **3c-01-3cr**  
 Provides international students with an opportunity to improve their ability to speak and write English before they take ENGL 100 and 101. Emphasizes individualized exercises and assignments. Carries graduation credit but does not meet Liberal Studies English requirements.
- ENGL 202 Research Writing** **3c-01-3cr**  
**Prerequisites:** ENGL 101, sophomore standing  
 Teaches students to read, analyze, and evaluate nonfiction sources and to present the results of their analysis in clear, organized, carefully documented research papers. The focus of reading and research in each section is determined by the instructor.
- ENGL 203 Introduction to Language Studies** **3c-01-3cr**  
**Prerequisite:** ENGL 101  
 Introduces the study of linguistics and rhetoric. Considers cultural contexts and issues of power, focusing on questions such as how our brains use language, how language represents the world we live in, and how language influences our actions.
- ENGL 208 Introduction to Film Studies** **3c-01-3cr**  
 Concentrates on the film as an artistic medium. Eight to twelve motion pictures are shown during semester and are analyzed in class discussions.
- ENGL 210 British Literature to 1660** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
 Surveys British literature from its beginnings to about 1660, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and provides them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate works.
- ENGL 211 British Literature 1660-1900** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
 Surveys British literature from about 1660 to the beginning of the twentieth century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and providing them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate work.
- ENGL 212 American Literature: Beginnings to 1900** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
 Provides an understanding of American literature from its beginning to about 1900. Concentrates primarily upon a relatively small number of major works, each of which helps to illustrate the "spirit of the age" it represents.
- ENGL 213 British and American Literature Since 1900** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
 A survey of major authors and works in British and American literature since 1900. Begins with the shift from Victorianism and late nineteenth-century literature into modernism, as exemplified by writers such as Woolf, Hemingway, and O'Neill, and continues with postmodernism and contemporary literature.
- ENGL 220 Advanced Composition** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
 Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.
- ENGL 221 Creative Writing** **3c-01-3cr**  
**Prerequisite:** ENGL 121 or 122 or FNLG 121  
 A seminar course in which students are expected to produce a substantial body of written work in one or more of the creative genres, the particular kind of writing chosen with regard to the special interests and abilities of each student.
- ENGL 222 Technical Writing** **3c-01-3cr**  
**Prerequisite:** ENGL 101  
 Focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer. (Offered as ENGL 322 prior to 2009-2010)
- ENGL 225 Introduction to Literature by Women** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122 and 202  
 Major trends and motifs across genres (fiction, nonfiction, poetry, autobiography) which reflect themes and subjects of continuing interest to women writers. The intersection of genre with race, ethnicity, and social class are of particular significance.
- ENGL 226 Survey of Global Literature Since 1900** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202  
 Surveys twentieth century and contemporary global literature in English and/or translation. Readings are organized around major contexts and themes of colonialism, revolution, decolonization, nationalism, and globalization.
- ENGL 265 Law and Literature** **3c-01-3cr**  
**Prerequisites:** Minimum grade of C in ENGL 101 and 202  
 Explores the historical and cultural connections between selected legal texts and themes as they relate to novels, poems, films, drama, essays, and other literary genres.
- ENGL 281 Special Topics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.
- ENGL 301 British Medieval Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 202, 210, 211, 212, 213  
 Examines particular literary traditions in England from the eleventh to the fifteenth centuries, excluding Chaucer. Acquaints students with the diversity of materials, ranging from prose to verse, oral to written, and serious to comic. Most texts are taught in the original Middle English, accompanied by side glosses. Translations are used where appropriate. Rather than survey the period comprehensively, the purpose is to focus closely on particular aspects or writers as selected by the instructor.
- ENGL 302 Renaissance Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 Examines major works and genres in Elizabethan literature such as pastoral and tragedy and key fiction writers, dramatists, and poets during 1558-1603. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor.
- ENGL 303 British Enlightenment Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 British Enlightenment Literature refers to the imitation of the Greek and Roman authors of antiquity. Begins with the assumptions and goals of neo-classical literature and integrates the intellectual debates and contemporary politics (patriarchy, nascent capitalism, empire, slavery, class divisions) that flourished alongside of (and that shaped the emergence of) new genres (the slave narrative, the novel, gothic tales, the periodical essay). Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.
- ENGL 304 British Romantic Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 Emphasizes the relationship between literature and its milieu. Focuses primarily on English Romantic Poets but considers development in Germany, France, and America and examines its continuing manifestations in liter-

ature, culture, and politics. Rather than survey the period comprehensively, the purpose here is to focus closely on a specific literary period and on the writers of this period as selected by the instructor.

**ENGL 305 British Victorian Literature** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Examines literary works against a background of rapidly changing social, economic, religious, and political forces. Counterculture movements, such as the Pre-Raphaelites, are examined against “high Victorianism” to develop a sense of the tremendous intellectual and political energy of the period. Roots of recent concerns such as feminism, political literalism, and capitalism are explored to help us better understand our own as well as the Victorian age. Rather than survey the period comprehensively, the purpose is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 306 Modern British Literature** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Examines major works and trends in modern British literature, such as modernism or key fiction writers, dramatists, or poets during the first half of the twentieth century. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 307 Contemporary British Literature** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Examines major works and trends in contemporary British literature, such as late modernism, postmodernism, the age of diminishment, or key novelists, dramatists, and/or poets from the period 1945 to the present. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 308 Critical Theory** 3c-01-3cr

**Prerequisites:** Minimum grade of C in ENGL 122  
Explores the major writings, writers, issues, technical vocabulary, and critical methods in literary, textual, and cultural studies theory; acquaints students with how such theoretical methods affect the way literary and cultural texts are read, studied, and taught; and enables the students to recognize and engage in theoretical praxis of various kinds. (Offered as ENGL 401 prior to 2009-2010)

**ENGL 310 Public Speaking** 3c-01-3cr

**Prerequisite:** ENGL 101  
Fundamental principles of public speaking, audience analysis, interest, and attention and selection and organization of speech material.

**ENGL 311 Oral Interpretation** 3c-01-3cr

**Prerequisite:** ENGL 310  
Emphasizes understanding and appreciation of literature through developing skill in reading aloud.

**ENGL 313 Rhetorical Trends and Traditions** 3c-01-3cr

**Prerequisite:** ENGL 101  
A survey of the major issues in and uses of rhetorical theory and criticism in contemporary culture, using rhetorical concepts from ancient through contemporary times. Rhetoric is the humanistic study of the ways people manipulate language and try to persuade others in the social world.

**ENGL 314 Speech and Communication in the Secondary English Classroom** 3c-01-3cr

**Prerequisites:** ENGL 122, 202  
Offers practical and theoretical approaches to relationships between oral and written communication. Performance based (involving a variety of communication activities) and knowledge based (involving study of research on language arts relationships). Emphasizes integration of the four language arts for improving teachers’ own communication skills as well as those of their students.

**ENGL 315 American Literature to 1820** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
The beginnings of American literary cultures from sixteenth-century pre-Columbian indigenous contacts with European explorations, through diverse colonializations (Hispanic, French, and British) including the importation

of African slaves, up to the American Revolution and emergent U.S. literary nationalism in the first decades of the nineteenth century. Rather than survey the period comprehensively, the purpose is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 316 American Literature 1820-1880** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Examines major works and trends in U.S. literature, from the Federalist, Romantic, and/or Realistic periods. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 317 American Literature 1880-1940** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Examines representative U.S. writers during 1880-1940. Includes traditional figures as well as writers who have recently entered the canon. Rather than survey the period comprehensively, the purpose here is to focus closely on particular aspects or writers as selected by the instructor.

**ENGL 318 Literature for Adolescents** 3c-01-3cr

**Prerequisites:** ENGL 101, 122, or permission, English Education major  
Surveys poetry, drama, and fiction with which the adolescent is familiar through school work and personal reading.

**ENGL 319 American Literature 1940-Present** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
Additional focuses on various movements, themes, genres, and authors writing in the United States since 1940. Not a survey course; each section will develop an extended treatment of a particular topic selected by the instructor. Emphasizes writing by living writers to develop an understanding of the diversity, formally and thematically, of current U.S. literary production across genders and ethnicities.

**ENGL 321 Persuasive Speech and Writing** 3c-01-3cr

**Prerequisite:** ENGL 202  
Focuses on the practice of persuasive discourse in speech, writing, and visual media. Includes projects and readings in debate, written argument, and rehearsed and extemporaneous speaking. Students investigate such subjects as rhetorical foundations and applications, language choice and stylistic variations, popular culture, literature, and communication dynamics.

**ENGL 323 Teaching Literature and Reading in the Secondary School** 3c-01-3cr

**Prerequisites:** ENGL 122, 202  
Introduces the theory and research on teaching literature and reading in the secondary school. Reviews reader-response literary theory and classroom-based research on teaching literature. Also reviews socio-psycholinguistic reading theory and classroom-based research on teaching reading.

**ENGL 324 Teaching and Evaluating Writing** 3c-01-3cr

**Prerequisites:** ENGL 122, 202, English Education major or permission  
A study of modern approaches to the teaching of writing, including current theories on the composing process, as well as instruction in evaluating, including holistic scoring. Includes practice in writing.

**ENGL 325 Writing Poetry** 3c-01-3cr

**Prerequisites:** ENGL 221 or instructor permission  
A writing workshop for students who wish to focus intensively on the writing and revision of poetry and on developing an audience for one’s creative work.

**ENGL 326 Writing Fiction** 3c-01-3cr

**Prerequisites:** ENGL 221 or instructor permission  
A writing workshop for students who wish to focus intensively on the writing and revision of fiction and on developing an audience for one’s creative work.

**ENGL 327 Writing Creative Nonfiction** 3c-01-3cr

**Prerequisite:** ENGL 221 or instructor permission  
A writing workshop for students who wish to focus intensively on the writing and revision of literary nonfiction forms and on developing an audience for one’s creative work.

- ENGL 328 Introduction to Linguistics** **3c-01-3cr**  
An introduction to the study of languages as complex sets of interacting systems needed for human communication in a variety of interpersonal, academic, and professional contexts. Focuses on the fundamentals of sound systems, word structures, sentence structures, text structures, meaning systems, and language-related power systems. Also considers questions of how language develops over time, how languages are made up of a number of varieties, how languages are learned and used, how language use varies for different groups of users, and how these issues are related to cultural contexts including issues of power.
- ENGL 329 The History of the English Language** **1c-01-1cr**  
**Prerequisite:** ENGL 202  
Studies historical development of the English language, as a basis for a better understanding of modern American English.
- ENGL 330 The Structure of English** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
An introduction to the fundamentals of language study with an equal emphasis on the sound, word, sentence, meaning, and discourse patterns of English. Educationally relevant topics, such as applications of linguistics to the teaching of English language and literature, varieties of grammar, and linguistic descriptions of styles and registers are an integral part of the course. Course is a prerequisite for EDUC 452.
- ENGL 332 Film Genres** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 208  
Offers a close examination of classic and contemporary films and film theory from a variety of critical perspectives—for example, spectatorship, auteurism, feminism, historiography, and cultural studies—through a focus on genre.
- ENGL 333 Psycholinguistics** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
Concerns the interrelation between language system and behavior and various factors of human psychology. Surveys developments since the 1940s, including relationships between language and perception, biology, memory, meaning, and cognition, as well as oral and written behavior. Students of language and literature may improve their assumptions about how human beings use language.
- ENGL 335 Literary Nonfiction** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
Focuses on the study of forms of literary nonfiction, in English, which may include traditional essays, lyric essays, memoir, and/or creative nonfiction depending on the instructor's expertise.
- ENGL 336 Language, Gender, and Society** **3c-01-3cr**  
**Prerequisites:** ENGL 202, junior standing  
Investigates the various ways that language and gender interact and intersect in society. Examines such questions as: Does society use language to favor one sex over the other? Why is language a crucial component in formulating constructs of masculinity and femininity? What stereotypes of gender-based language are promoted in our society? How can we analyze language to reveal disparate views and treatment of the sexes?
- ENGL 337 Myth** **3c-01-3cr**  
**Prerequisites:** ENGL 202; at least two from ENGL 210, 211, 212, 213  
**Additional prerequisites for B.A. ENGL majors:** ENGL 210, 211, 212, 213  
Examines the nature and function of the mythic experience and explores the archetypal patterns of myths from various cultures.
- ENGL 338 Oral Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
Acquaints students with the nature of oral composition, the habits of thought that orality fosters, and the particular mode of awareness the oral dimension of literature demands of an audience (and awakens in a reader). At the conclusion, students should have an understanding of the formulaic nature of such purely oral forms as the ballad and the epic and an awareness of the manner in which orality patterns thought differently from writing, and should be able to detect oral features and patterns in works of literature from cultures not primarily oral but containing a high “oral residue.”
- ENGL 340 The Novel** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
Focuses on the forms and theories of the novel as a genre. Emphasizes major writers and movements as well as significant historical developments. (Offered as ENGL 214 prior to 2009-2010)
- ENGL 341 Poetry** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
Studies the forms and theories of poetry as a genre. Includes study of major writers, movements, and aesthetic developments. (Offered as ENGL 215 prior to 2009-2010)
- ENGL 342 Short Fiction** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
Studies the form and theory of short fiction as a genre. Emphasizes major writers and movements as well as significant historical developments. (Offered as ENGL 216 prior to 2009-2010)
- ENGL 343 Drama** **3c-01-3cr**  
**Prerequisites:** ENGL 101, 122, or permission  
Focuses on the forms and theories of drama as a genre. Emphasizes major writers and movements as well as significant historical developments. (Offered as ENGL 217 prior to 2009-2010)
- ENGL 344 Ethnic American Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 122 and 202 or permission  
Concerned with ethnic U.S. experiences as expressed in poetry, fiction, drama, and autobiography. The topic will vary and be announced in advance. Examples include Asian-American, Hispanic, Irish-American, Jewish- American, and Native-American literatures.
- ENGL 347 Playwriting** **3c-01-3cr**  
**Prerequisite:** THTR 110 or instructor permission  
A practical exploration of the craft and process of playwriting. Focuses primarily on the practical, “hands-on” experiences approximating the “developmental process” currently in use in the American theater. The student is guided from the initial concept through synopsis, outlines, working drafts, and completion of an original one-act play and a “staged reading” of this project. **Note:** Cross-listed as THTR 347. Either of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.
- ENGL 348 African-American Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122 and 202  
Primarily nineteenth- and twentieth-century African-American literature (poetry, fiction, nonfiction): includes works by Frederick Douglass, W.E.B. Du Bois, spirituals and folk poetry, Harriet B. Wilson, Jean Toomer, Richard Wright, Audrey Lorde, and Toni Morrison. Emphasizes historical context and an Afrocentric approach.
- ENGL 349 English Bible as Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122 and 202  
Considers literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon writers and speakers of modern English. Offers a close reading of the major narrative and poetic portions of the Old Testament.
- ENGL 350 Gender and Sexual Orientation in Literature, Theory, and Film** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
Introduces literature, film, and theory that focus primarily on lesbian, gay, bisexual, and transgender perspectives. Inquires into the representation of gender and sexuality within historical and cultural contexts.
- ENGL 354 Classical Literature in Translation** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202  
Masterpieces studied range from those of ancient Greece to Middle Ages. English literature and American literature excluded.

- ENGL 360 Editing and Publishing** **3c-01-3cr**  
**Prerequisites:** ENGL 202 and 220 or 221  
 A project-based career preparation course focused on creating, editing, and publishing in print and/or electronic forms. Includes theory and practice of editing, practice with publication tools, and group collaboration.
- ENGL 361 Environmental Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122, 202  
 Focuses on literature devoted to natural and constructed environments, exploring connections among such topics as nature writing, environmentalism, ecocriticism, place studies, bioregionalism, and environmental justice.
- ENGL 385 Advanced Studies in Women's Literature** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122, 202  
 Considers issues of genre and canon revision and why particular genres may have particular appeal for women writers. Also considers major feminist literary theories and their applications. While many of our readings are by "literary women," we also may consider works by women who are professionals in nonliterary disciplines.
- ENGL 386 Regional Literature in English** **3c-01-3cr**  
**Prerequisites:** ENGL 122 and 202 or permission  
 Examines the contributions of a particular region to national literature. The focus might be any of the following: Appalachian writers, local color writers, New England writers, Southern writers, writers of the American West, or Canadian writers.
- ENGL 387 Irish Literature** **3c-01-3cr**  
**Prerequisite:** ENGL 121 or 122  
**Additional Prerequisite for B.A. ENGL majors:** ENGL 213  
 An introduction to Irish literature since 1800, with particular emphasis on the Literary Revival in the early twentieth century. Key authors include Yeats, Joyce, Synge, O'Casey, Edgeworth, Somerville and Ross, Gregory, Beckett, and Heaney. The development of Irish writing is examined within the contexts of Irish history, language, culture, and politics.
- ENGL 390 Literary Tour: Britain** **var-3cr**  
 Offered selected summers, for five weeks during the first or second summer session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.
- ENGL 391 Selected Works from the Medieval Period** **3c-01-3cr**  
**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
 A comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as FNLG 391.
- ENGL 393 Romanticism** **3c-01-3cr**  
**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
 A study of the principal authors and works of late eighteenth-century and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as FNLG 393.
- ENGL 394 Nineteenth-Century European Novel in Translation** **3c-01-3cr**  
**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
 A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as FNLG 394.
- ENGL 395 Selected Writers from Twentieth-Century Europe** **3c-01-3cr**  
**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
 A comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as FNLG 395.
- ENGL 396 The Literature of Emerging Nations** **3c-01-3cr**  
**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
 A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works are mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as FNLG 396.
- ENGL 398 Global Genres** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
 Focuses on a specific literary genre (including, but not limited to, poetry, drama, film, the short story, or the novel) as it has been developed and transformed in global contexts beyond the typical domains of the British or American literary traditions. Situates the use of a genre within transnational literary and historical developments. The global genre studied in a particular semester to be announced in advance.
- ENGL 420 Writers' Studio** **3c-01-3cr**  
**Prerequisite:** ENGL 220 or 221  
 An upper-division course emphasizing reading, discussion, and writing on specialized topics related to the study and performance of writing. The focus varies from semester to semester according to the expertise of the faculty member teaching the course.
- ENGL 421 Digital Writing** **3c-01-3cr**  
**Prerequisite:** ENGL 202  
 Introduces composition and presentation issues in writing for digital media. Focuses on the conventions of digital writing and provides students practice in conceiving, composing, and producing networked texts and may include creative expression, persuasion, and collaboration. Extends traditional literacy skills into emergent, digital genres.
- ENGL 422 Technical Writing II** **3c-01-3cr**  
**Prerequisite:** ENGL 322  
 An advanced workshop/tutorial that provides intensive instruction in technical writing. Builds on the basics of audience, readability, proposals and reports, letters, memos, and resumes covered in Technical Writing I. Describes the writer's role in such areas as legal and ethical aspects of technical communication; planning, testing, reviewing, and evaluating documents; and proofreading and editing.
- ENGL 426 ESL Methods and Materials** **3c-01-3cr**  
**Prerequisite:** Senior standing or instructor permission  
 An introduction to English as a Second Language theory and practice. Aims: 1) general understanding of current theory and methods of teaching ESL; 2) ability to select appropriate, and adapt existing, materials for elementary and high school ESL students.
- ENGL 430 Major British Author** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 Examines major works of a single major author, including biographical, literary, and cultural contexts. Places the author within both intellectual/cultural history and literary developments. Major author studied in a particular semester to be announced in advance.
- ENGL 432 Chaucer** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 Studies Chaucer, his life, his language, the development of his literary style, and his art, with and through his major poetical works.
- ENGL 434 Shakespeare** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202, and one of 210-213 or 226  
 Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy.
- ENGL 436 Major American Authors** **3c-01-3cr**  
**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226  
 Studies in the literary output of a major American author or authors against the background of the social and literary milieus in which the works were created. Specific subject or subjects to be announced by the instructor.
- ENGL 437 Major Global Authors** **3c-01-3cr**  
**Prerequisites:** ENGL 121 or 122; 202; and either 209 or 396  
 Examines major works in English and/or English translation of a single major global author not included in the British or American literary traditions. Situates the author within major transnational literary and

historical developments. Major author to be studied in particular semester to be announced in advance. (Offered as ENGL 399 prior to 2009-2010)

**ENGL 440 Major Figures in Film** 3c-01-3cr

**Prerequisites:** ENGL 121 or 122; and 202, 208

Studies major artists and their contributions to the development of film as an art form from its beginnings to the present. Close analyses of directors, cinematographers, editors, screenwriters, or actors—as individuals or as representatives of a movement in film. Topics vary from semester to semester; thus, one semester may concentrate on a specific director such as Alfred Hitchcock; another semester might study women (as directors, actresses, and editors); and yet another semester might study a collective movement such as film noir. (Offered as ENGL 357 prior to 2009-2010)

**ENGL 450 Film Theory** 3c-01-3cr

**Prerequisites:** ENGL 121 or 122; and 202, 208

An introduction to major film theories, studied in relation to representative films. Details the complex relationship between film production and film theory: i.e., how theorists have attempted to explain what appears on the screen, its impact, and its relation to “reality,” and how filmmakers have responded to the works of theorists (with the two sometimes being the same). Goes far deeper into understanding film than ENGL 208, which focuses mainly on how film is constructed through aesthetic and institutional processes. (Offered as ENGL 356 prior to 2009-2010)

**ENGL 460 Topics in Film** 3c-01-3cr

**Prerequisites:** ENGL 101, 208

Selected films dealing with a specific, advanced topic are viewed and assessed to explore the different roles that film plays. Topic to be announced in advance.

**ENGL 461 Topics in British Literature** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226

Examines major works of a particular topic in British literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

**ENGL 462 Topics in American Literature** 3c-01-3cr

**Prerequisites:** ENGL 122, 202; and one of 210-213 or 226

Examines major works of a particular topic in American literature by focusing on its cultural and literary contexts. Topic to be announced in advance.

**ENGL 463 Topics in Global Literature and Film** 3c-01-3cr

**Prerequisite:** ENGL 202

Examines major works in English of a particular topic in global literature and/or film by focusing on the transnational contexts of history and culture surrounding the production and/or reception of literature and film. Topic of global literature and/or film to be announced in advance.

**ENGL 466 Topics in Theory** 3c-01-3cr

**Prerequisites:** Minimum grade of C in ENGL 122 and 308

Explores a specific issue, writer, or trend in English Studies theory. Topic to be announced in advance.

**ENGL 480 Seminar: Studies in English and American Literature** var-3cr

**Prerequisites:** ENGL 101, 122, 202

**Corequisites:** ENGL 211, 212, 213, or permission

A seminar experience for advanced students. Students considering graduate work in English might well wish to enroll, but students with a variety of career goals—business, industry, law, government service—can take advantage of this opportunity to plan a schedule of independent study with the help of a faculty mentor.

**ENGL 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Topics vary from semester to semester covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.

**ENGL 482 Independent Study** var-1-6cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ENGL 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**ENGL 484 Topics in English Studies** 3c-01-3cr

**Prerequisites:** Declared ENGL major; ENGL 122, 202; minimum 24cr in major

Explores themes that may vary according to the faculty member teaching the course. Gives upper-level English majors an opportunity to share their expertise in their major: literary/textual/cultural, writing, film, or language studies. Students will be part of a community of learners and reflect upon the ways disciplinary knowledge is constructed in English Studies and will construct a portfolio of their work as an English major, both in and out of this class, in order to assess their growth and potential as readers, writers, and critical thinkers.

**ENGL 493 Internship** var-3-12cr

On-the-job training opportunities in related areas. Application and acceptance to internship program required.

**EOPT: Electro-Optics**

**Department of Physics**

**College of Natural Sciences and Mathematics**

**EOPT 105 Computer Interfacing in Electro-Optics** 2c-31-3cr

Teaches the fundamentals of interfacing the personal computer to its physical surroundings such as electro-optics equipment. Students do graphical programming and learn to use virtual instruments in order to collect data and to control experiments. They use a program that employs graphical block diagrams that compile into machine code. Includes a lab component.

**EOPT 110 Geometric Optics** 2c-31-3cr

**Corequisite or Prerequisite:** PHYS 100

Introduces the principles and theory of light as a geometric ray and gives an elementary treatment of image formation. Topics include reflection, refraction, prisms, lenses, mirrors, pupils, stops, aberrations, optical instruments, aspherical surfaces, and optical system design and evaluation. Includes a lab component.

**EOPT 120 Wave Optics** 2c-31-3cr

**Prerequisite:** EOPT 110

**Corequisite or Prerequisite:** MATH 110 or 121

Provides the basic knowledge of the wave nature of light. Topics include spectral characteristics of light, propagation of light, interference, diffraction, polarization, windows, filters, beam splitters, and gratings. Includes a lab component.

**EOPT 125 Introduction to Electronics** 3c-31-4cr

**Corequisite or Prerequisite:** MATH 110 or 121

Introduces basic analog and digital electronics. Emphasizes direct current (DC) circuits and networks utilizing Ohm’s Law and focuses upon the use of electronic instrumentation and design using operational amplifiers as “black box” building elements. In addition, the digital component covers basic digital logic and its implementation in hardware using integrated circuit-based logic gates and counters. Includes a lab component.

**EOPT 126 Electronics II for Electro-Optics** 2c-31-3cr

**Prerequisite:** EOPT 125 or instructor permission

Introduces a variety of digital and advanced analog circuits and components commonly used in electro-optic systems. Students learn basic working principles of circuits utilizing operational amplifiers, gates, and flip-flops and apply this knowledge toward constructing and troubleshooting these circuits.



**EOPT 150 Fundamentals of Photonics and Laser Safety 2c-31-3cr****Prerequisite:** PHYS 100 or Placement Test

Introduces the field of photonics. Acquaints the student with the various concepts associated with the nature of light and lasers. Explores the nature of light and lasers using hands-on explorations, problem-solving techniques, and practical current applications. Topics include nature and property of light, optical handling and positioning, basic geometrical optics, basic physical optics, and principles of lasers.

**EOPT 210 Detection and Measurement 2c-31-3cr****Prerequisites:** EOPT 120, 125

Covers electronic amplification, optical detectors, and the measurement of small distances using interference effects. Operational amplifiers are used to build circuits to measure the output of photon and thermal detectors. In order to accurately measure properties such as wavelengths, absorption of wavelengths, defects in lenses, prisms, and flat plates, the following instruments are used by the students: monochromators, spectrophotometers, and interferometers. Includes a lab component.

**EOPT 220 Introduction to Lasers 2c-31-3cr****Prerequisite:** EOPT 120

Different types of incoherent light sources are discussed and investigated. The concepts of laser safety are introduced. The elements and operation of an optical power meter are covered. The energy-level diagrams and the energy-transfer processes in the active medium are discussed. The spatial and temporal properties of lasers are investigated along with other characteristics such as modes of oscillation. Some applications of lasers are investigated. Includes a lab component.

**EOPT 240 Fiber Optics 2c-31-3cr****Prerequisite:** EOPT 120

Covers basic concepts in fiber optics such as dispersion, attenuation, and single-mode and multimode propagation. Fiber optic test equipment such as optical time domain reflectometers and optical power meters is discussed and investigated. Covers sources, detectors, and optical amplifiers. Includes a lab component.

**EOPT 250 High-Vacuum Technology 2c-31-3cr****Prerequisite:** PHYS 116

Teaches how to produce and measure a vacuum. Presents the properties of gases and the concepts of fluid flow and pumping. Many different kinds of vacuum pumps are discussed in detail. The concept of measuring a vacuum is introduced through the discussion of vacuum gauges and gas analyzers. Covers the techniques of leak detection and thin film deposition. The concept of ultrahigh vacuum is touched upon. Includes a lab component.

**EOPT 260 Industrial Applications of Lasers 2c-31-3cr****Prerequisite:** EOPT 220

Laser power and energy measurements are made. The theory and applications of industrial lasers are covered. Material processing such as welding, cutting, and hole drilling is discussed, implemented, and analyzed. The role of optics in laser machining is covered. Laser safety is emphasized. Includes a lab component.

**FCSE: Family and Consumer Sciences Education****Department of Human Development and Environmental Studies****College of Health and Human Services****FCSE 281 Special Topics var-1-3cr****Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FCSE 350 Teaching Family Life Education 3c-01-3cr****Prerequisites:** EDUC 242**Corequisite:** EDSP 102

Emphasizes teaching family life education in family and consumer sciences classrooms and through community organizations and agencies. Lessons are planned and implemented using a variety of instructional methods incorporating adaptations and modifications for special needs learners, basic

skills, global concerns, and use of a problem-solving/decision-making approach. Planning of content, learning activities, instructional materials, and evaluation based on clearly stated objectives are emphasized. A micro-computer spreadsheet is utilized to manage a department budget and a gradebook. Participation in professional organization activities is expected.

**FCSE 450 Teaching Vocational and Family Consumer Science Education 3c-01-3cr****Prerequisite:** FCSE 350

Emphasizes teaching vocational family and consumer sciences in consumer/homemaking and occupational family and consumer sciences programs. Federal legislation impacting on family and consumer sciences is analyzed for use in program decisions. Emphasizes program development using CBVE model, development of individual learning packets, vocational youth organizations, advisory committees, family and consumer sciences and vocational educational priorities, professional organizations, proposal development for funding, impact on public policy, marketing family and consumer sciences, and development of a personal philosophy of family and consumer sciences education.

**FCSE 481 Special Topics var-1-3cr****Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FCSE 482 Independent Study var-1-3cr****Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Upper-level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3cr. Approval is based on academic appropriateness and availability of resources.

**FDED: Foundations of Education****Department of Professional Studies in Education****College of Education and Educational Technology****FDED 102 American Education in Theory and Practice 3c-01-3cr**

Familiarizes prospective teachers with the history and philosophy of American education and with some of the practical aspects of teaching in the American public school classroom.

**FDED 281 Special Topics var-1-3cr****Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FDED 440 Orientation to Teaching in Urban Centers 3c-01-3cr**

Provides an understanding of learners and their unique learning needs and conditions. Emphasizes understanding the origin of attitudes and values and how these affect the relationships which exist between students and teachers. Special attention given to practical application of theoretical information to problems of urban education. Emphasizes field trips and guest speakers.

**FDED 441 Field Experiences in Urban Education 3c-01-3cr**

A specialized experience for students who are considering teaching in inner-city schools. Aspects to be emphasized include physical characteristics of community, background and aspirations of children and parents, and specialized teacher competencies, classroom management, planning, instructional materials, teaching strategies, and evaluation. All participating preservice teachers will receive significant exposure to English Language Learners and students with special needs. Schools selected for student experiences are located in Philadelphia. May be substituted for EDUC 242 with program approval and completion of Step 1 for teacher certification.

**FDED 442 Interpreting Urban/Field Experiences var-3cr****Prerequisites:** FDED 440, 441

An evaluation of learning and behavior problems encountered during field experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology, and education who function as resource personnel giving direction. Enables students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

**FDED 454 Public School Administration 3c-01-3cr**

The study of the development of public school administration; current organizational patterns for public education at the local, county, state, and national levels; and the impact of administration upon the total educational program.

**FDED 456 Issues and Trends in Education 3c-01-3cr**

Critical analysis of issues and trends in education with emphasis on philosophical and social dimensions of topics covered. Attention to work of some major contemporary critics of education.

**FDED 481 Special Topics var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FDED 482 Independent Study var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FDNT: Food and Nutrition  
Department of Food and Nutrition  
College of Health and Human Services**

**FDNT 110 Careers in Food and Nutrition 1c-01-1cr**

Career possibilities for nutrition majors are explored. Students are guided in clarifying their professional goals and become acquainted with the educational and experiential requirements necessary to attain these goals.

**FDNT 143 Nutrition and Wellness 3c-01-3cr**

Introduces the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Successful completion of FDNT 143 fulfills the Liberal Studies Health and Wellness requirement. HPED/NURS 143 also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**FDNT 145 Introduction to Nutrition 3c-01-3cr**

Provides an understanding of essential nutrients and their roles in the body, as well as the changing nutritional needs of an individual throughout the lifespan. Includes the impact of exercise and food choices on metabolism, body composition, and weight control; nutrition misinformation; consumer issues; commercially prepared foods; and major diseases that are affected by eating behaviors.

**FDNT 150 Foods 3c-01-3cr**

**Prerequisites:** Grade of C or higher in FDNT 151, and CHEM 101 or 111  
Basic principles of food: composition, sanitation, preparation, and preservation.

**FDNT 151 Foods Laboratory 0c-31-1cr**

**Prerequisite:** CHEM 101 or 111  
Application of the basic principles of food preparation.

**FDNT 212 Nutrition 3c-01-3cr**

**Prerequisite:** CHEM 102 or 112

Sources and functions of nutrients, interdependence of dietary essentials, and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life.

**FDNT 213 Life Cycle Nutrition 3c-01-3cr**

**Prerequisite:** FDNT 212 with a grade of C or higher  
A detailed study of nutrition during all stages of the human life cycle; current issues and research as they impact on these developmental stages.

**FDNT 245 Sports Nutrition 3c-01-3cr**

**Prerequisite:** FDNT 145 or 212  
Emphasizes knowledge and application of sports nutrition principles. The impact of the macro- and micro-nutrients on physical performance is discussed in light of current scientific research and applied to realistic dietary recommendation for all types and levels of athletes.

**FDNT 250 Quantity Foods in Healthcare and Schools 3c-61-6cr**

**Prerequisites:** FDNT 150/151 or instructor permission  
A problem-based learning approach to food service principles, which guide dietetic professionals in practice. Students research and present case studies within the scope of the healthcare industry, and school feeding includes procedures for inventory control, food production, and purchasing as applied to schools and the healthcare arena. Laboratory experience reinforces didactic concepts.

**FDNT 281 Special Topics var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FDNT 355 Medical Nutrition Therapy I 3c-01-3cr**

**Prerequisites:** FDNT 212 with a grade of C or higher, and BIOL 155 or 150/151  
An interpretation of anthropometric, laboratory, clinical, and dietary data in nutrition assessment. Pathophysiology of and evidence based medical nutrition therapy for caloric imbalance, diabetes, and cardiovascular diseases. Use of food exchange systems in diet prescription and menu planning. (Titled Nutrition in Disease I prior to 2010-2011)

**FDNT 357 Special Problems in Foods 0c-41-3cr**

**Prerequisite:** FDNT 150  
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food.

**FDNT 362 Experimental Foods 2c-31-3cr**

**Prerequisites:** FDNT 150, 355 or concurrently, MATH 217  
The experimental study of foods, relating chemical and physical properties to reactions and processes occurring in food systems.

**FDNT 364 Methods of Teaching Food and Nutrition 3c-01-3cr**

**Prerequisite:** FDNT 213 with a grade of C or higher  
Focuses on nutrition education methods to support health-promoting dietary behaviors for different populations in a variety of settings. Provides experience in the development of theory-based educational programming via assessing needs, developing objectives, creating/selecting accompanying materials and activities, implementing appropriate instructional strategies, assessment, and evaluation.

**FDNT 402 Community Nutrition 3c-01-3cr**

**Prerequisite:** FDNT 212  
Nutritional implications of both good and poor nutrition for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Taught Spring semester only.

**FDNT 410 Food, Nutrition, and Aging 3c-01-3cr**

**Prerequisite:** Junior status  
Relationship of food to health maintenance and special dietary problems during the middle and later years.

**FDNT 430 Professional Topics in Food and Nutrition 3c-01-3cr**

**Prerequisites:** FDNT 355, 364, HRIM 256, PSYC 101

Topics include promoting food and nutrition services and programs, career planning and development, ethical challenges to dietitians, quality assurance standards, and impact on the legislative process.

**FDNT 444 Food Composition and Biochemistry** 3c-01-3cr

**Prerequisite:** CHEM 255

Basic chemistry and biochemistry of essential components of food originating from plant and animal sources.

**FDNT 447 Nutritional Aspects of Food Technology** 3c-01-3cr

**Prerequisites:** BIOL 241; FDNT 212; junior status

A study of current known effects of food processing techniques on the nutritional value and safety of foods.

**FDNT 455 Medical Nutrition Therapy II** 3c-01-3cr

**Prerequisite:** FDNT 355 with a grade of C or higher

Pathophysiology of and evidence-based medical nutrition therapy for disorders of the gastrointestinal, renal, hepatic, and immune systems, inborn errors of metabolism, cancer. Nutrition support. (Titled Nutrition in Disease II prior to 2010-2011)

**FDNT 458 Advanced Human Nutrition** 4c-01-4cr

**Prerequisites:** CHEM 255 or 351, FDNT 355, MATH 217

An in-depth study of the nutrients and their function within the cell. Incorporation of the principles of physiology and biochemistry in the study of nutrition. Emphasizes applying current research and evaluation of research methodology. (Does not count toward M.S. degree in FDNT requirements)

**FDNT 461 Microwave Cooking Technology** 2c-21-3cr

The study of the electronic technology, selection, care, and use of the microwave oven. Includes basic physical and chemical concepts related to microwave cooking. Individual investigative research problems are required.

**FDNT 462 Advanced Experimental Foods** 1c-41-3cr

**Prerequisites:** CHEM 231, FDNT 362

An experimental approach to the many factors influencing the chemical and physical properties of food. Use of the scientific method in developing an individual project combining an evaluation of current literature and appropriate sensory and analytical methodology.

**FDNT 463 Nutrition Counseling** 2c-31-3cr

**Prerequisites:** FDNT 355, PSYC 101, FDNT 455 or concurrently

Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (3 hours per week) counseling clientele in normal and therapeutic nutrition.

**FDNT 464 Food and Nutrition Research Methods** 3c-01-3cr

**Prerequisites:** CHEM 351, FDNT 362, 458, and MATH 217

An introduction to research methodology in foods and nutrition. Includes theory and techniques of physical, chemical, and instrumental analysis. Applications of these methods to food and animal models with statistical analysis of data.

**FDNT 470 Human Food Consumption Patterns** 3c-01-3cr

**Prerequisites:** One social science course

An exploration of human food consumption behaviors from food production to individual and societal consumption patterns. Influencing factors discussed include agronomic, economic, geographical, nutritional, political, sociological, and psychological factors. The ethics and morality of food distribution will also be discussed. Students may not enroll in this course if they have taken the corresponding section of LBST 499 Food and Culture.

**FDNT 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FDNT 482 Independent Study** var-1-6cr

**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office; must have earned 60cr

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FDNT 484 Senior Seminar** 1c-01-1cr

**Prerequisite:** Senior status

Emphasizes individual review of food and nutrition literature with formal presentation and discussion of current research.

**FDNT 493 Internship** var-6-12cr

**Prerequisite:** Must have earned 60cr

Provides an opportunity to work away from the university in supervised job situations at health care facilities, restaurants, or other institutional food service or lodging establishments. Objective is to provide students with job-related experiences. Must meet university internship requirements.

**Note:** White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

**FIAR: Fine Arts**

**College of Fine Arts**

**FIAR 101 Introduction to the Arts** 3c-01-3cr

Introduces the basic concepts and significance of art, music, and theater.

For each of these arts, students learn the basic elements, gain an overview of artistic styles, and are exposed to representative artworks, as well as actually experiencing and responding to arts events. ARHI 101, MUHI 101, THTR 101, or DANC 102 may be used interchangeably for D or F repeats of FIAR 101 but may not be counted for duplicate credit.

**FIAR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FIAR 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FIAR 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FIAR 493 Internship** var-3-12cr

Covers the areas of the visual and performing arts.

**FIN: Finance**

**Department of Finance and Legal Studies**

**Eberly College of Business and Information Technology**

**Note:** Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**FIN 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

<b>FIN 310 Fundamentals of Finance</b>	<b>3c-01-3cr</b>	
<b>Prerequisites for Business majors:</b> ACCT 202, MATH 214		
<b>Prerequisites for non-Business majors:</b> ACCT 202, MATH 214 or 217 (MATH 214 recommended)		
The study of valuation models, financial statement analysis and forecasting, capital budgeting methods, and working capital management. Also includes an introduction to risk and return, capital markets and institutions, and security valuation.		
<b>FIN 315 Financial Analysis Using Electronic Spreadsheets</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> BTED/COSC/IFMG 101		
Develops the financial students' computer modeling and analysis skills. Teaches how to utilize current computing resources, electronic spreadsheet, and other computing software to analyze, model, and solve a variety of financial problems.		
<b>FIN 320 Corporate Finance</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> FIN 310		
The study of corporate financial management and decision-making, its theory, and application. Provides a higher level of study and many of the same topics covered in Fundamentals of Finance, particularly in the area of capital budgeting. Other topics include capital asset pricing models, costs of capital, capital structure, leasing bond refunding, and financial distress.		
<b>FIN 324 Principles of Investments</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> FIN 310		
An introduction to securities markets, trading, and valuation. Topics include security types and characteristics, the mechanics of trading, valuation models for fixed-income securities and common stock, mutual fund evaluation, basics of options and futures, and tax-advantaged investments.		
<b>FIN 350 Short-Term Financial Management</b>	<b>3c-01--3cr</b>	
<b>Prerequisites:</b> FIN 310, 315		
Provides the conceptual framework and analytical techniques for the short-term financial decisions made by the practicing manager as related to the corporate cash and marketable securities, inventory, accounts receivable, accounts payable, and the short-term borrowing and investing activities.		
<b>FIN 360 Insurance and Risk Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> FIN 310, 315		
Covers the nature of risk, the application of the risk management process to business risk management problems, and the essentials of insurance contracts and insurance markets. Discusses appropriate methods of risk control and risk financing. The primary focus is on accidental losses resulting from situations involving pure risks, although financial risk management techniques for dealing with speculative risks are introduced.		
<b>FIN 410 Financial Institutions and Markets</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> FIN 324		
A review of the structure of financial institutions and money and capital markets. Provides the knowledge of the theory and practices of managing financial institutions, with particular emphasis on the management of financial risks.		
<b>FIN 420 Investment Analysis</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> FIN 320, 324		
Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.		
<b>FIN 422 Seminar in Finance</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> FIN 320, 324, seniors only		
Primarily for the senior FIN major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.		
<b>FIN 424 International Financial Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> FIN 310		
The financial management concepts, useful in a single-country context, are adapted for the international variables and constraints caused by being international. Provides an insight into unique issues and problems the manager of the multinational enterprise will face, such as working capital management; capital budgeting process; financing and investing abroad; capital and money markets; foreign exchange markets; and risk management.		
<b>FIN 425 Financial Derivatives</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> FIN 320, 324		
Provides an understanding of how the derivatives markets work, how they are used, and how prices are determined. Includes the common types of derivatives, their characteristics and properties, and trading methods and strategies. Also covers fundamental pricing models based on arbitrage pricing theory, binomial, and Black-Scholes models.		
<b>FIN 481 Special Topics</b>	<b>var-3cr</b>	
<b>Prerequisite:</b> As appropriate to course content		
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.		
<b>FIN 482 Independent Study</b>	<b>var-3cr</b>	
<b>Prerequisite:</b> Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office		
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.		
<b>FIN 493 Finance Internship</b>	<b>var-3-12cr</b>	
<b>Prerequisites:</b> FIN 310, 315, 324, prior approval through advisor, faculty member, department chairperson, and dean, minimum cumulative 2.0 GPA; major 2.5 GPA		
Provides practical experience in the finance field to develop knowledge and provide application of theory to actual problems in a nonclassroom situation. Three credits are awarded for at least 120 hours of on-site work, up to 12cr for at least 480 work hours. A maximum of 3cr may be applied toward the FIN major area elective requirements. Additional internship credits must be used as business electives only.		
<b>FNLG: Study Abroad and Comparative Literature (Foreign Language)</b>		
<b>College of Humanities and Social Sciences</b>		
<b>FNLG 100 Study Abroad</b>	<b>var-1-12cr</b>	
Registration mechanism and limited credit arrangement as provided in preapproval process for Study Abroad programs coordinated through the International Education Office.		
<b>FNLG 121 Humanities Literature</b>	<b>3c-01-3cr</b>	
Introduces works, authors, and genres of general literary significance in the Western tradition. Not organized historically but trains the student in the critical reading and appreciation of literature from the present and other periods. Authors, works, and themes are studied with respect to cultural context, aesthetic form, and thematic significance. Taught in English. Substitutes for ENGL 121.		
<b>FNLG 391 Selected Works from the Medieval Period</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> ENGL/FNLG 121 or ENGL 122, 202		
A comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. Also listed as ENGL 391.		
<b>FNLG 392 Renaissance/Baroque/Classical</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> ENGL/FNLG 121 or ENGL 122, 202		
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's <i>Renaissance and Baroque</i> .		
<b>FNLG 393 Romanticism</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> ENGL/FNLG 121 or ENGL 122, 202		
The study of the principal authors and works of late eighteenth- and early nineteenth-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. Also listed as ENGL 393.		

**FNLG 394 Nineteenth-Century European Novel in Translation** 3c-01-3cr

**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
A survey of major nineteenth-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. Also listed as ENGL 394.

**FNLG 395 Selected Writers from Twentieth-Century Europe** 3c-01-3cr

**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
A comparative study of selected works of major importance per se or as representatives of major trends in twentieth-century literature. Also listed as ENGL 395.

**FNLG 396 The Literature of Emerging Nations** 3c-01-3cr

**Prerequisites:** ENGL/FNLG 121 or ENGL 122, 202  
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works are mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. Also listed as ENGL 396.

**FNLG 421 Language and Society** 3c-01-3cr

Considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

**FNLG 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**FRNC: French**  
**Department of Foreign Languages**  
**College of Humanities and Social Sciences**

**FRNC 101 Basic French I** 3c-01-3cr

**Prerequisite:** Appropriate score on the placement test (WebCape score below 260)  
Not open to native speakers, except by special permission of department. Special focus on aural/oral skills. Students learn in a multimedia environment. Students converse and ask questions in simple present tense. They become acquainted with elements of daily lives of native speakers of French around the world. Taught in the fall semester only.

**FRNC 102 Basic French II** 3c-01-3cr

**Prerequisite:** FRNC 101, or qualifying score on placement test (WebCAPE score between 260 and 336), or instructor permission  
A special focus on aural/oral skills. Students learn in a multimedia environment. Students converse and ask questions in simple present tense. They can now express commands and directions and are introduced to the expression of punctual actions in the past. They further investigate the daily lives of native speakers of French around the world. Taught in the Spring semester only.

**FRNC 201 Intermediate French I** 3c-01-3cr

**Prerequisite:** FRNC 102, or qualifying score on placement test (WebCAPE score between 337 and 402), or instructor permission  
A continued study of French; development of listening, reading, speaking, and writing, with special focus on aural/oral skills. Students learn in a multimedia environment. Students converse and ask questions in the past tense. Students learn the different way to express completed action that occurred at a specific time in the past vs. expressing an action that continued in the past over an indefinite, undetermined period of time. Through the use of multimedia, students continue their inquiries into the daily lives of native speakers of French around the world. Taught in the Fall semester only.

**FRNC 202 Intermediate French II** 3c-01-3cr

**Prerequisite:** FRNC 201, or qualifying score on placement test (WebCAPE score above 402), or instructor permission  
Development of listening, reading, speaking, and writing with special focus on aural/oral skills. Students learn in a multimedia environment. Students narrate and describe in the past tense, ask and give directions, talk about the future, avoid repetitions of nouns or names by using the proper object pronouns, learn to combine simple sentences, express and understand conditional sentences, express and understand subjective statements, and understand indirect discourse. Through the use of multimedia, students continue their inquiries into the daily lives of native speakers of French around the world. Taught in the Spring semester only.

**FRNC 203 Accelerated College French** 6c-01-6cr

Develops listening and speaking skills through an immersion method. Students use present, past, and future to indicative tenses in intensive aural/oral interaction and are expected to make use of the audio and video capabilities of the Foreign Language Learning Center on a weekly basis. Liberal Studies elective credit is given for this course.

**FRNC 253 Intermediate Composition and Conversation** 3c-01-3cr

An intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to FRNC 202 for majors or serious students.

**FRNC 254 Civilization of Modern France** 3c-01-3cr

**Prerequisite:** FRNC 202 or equivalent  
A study of modern French culture and civilization—social institutions, government, industry, economics, and geography. Development of all language skills for use in business situation in French-speaking environment. Emphasizes acquisition of an active knowledge of the business world.

**FRNC 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FRNC 301 Portraits of Women in the French Novel** 3c-01-3cr

Explores the polarity of the treatment of female characters in the French novel. Explores differences of treatment by male and female writers through inclusion of women novelists. Provides a chronological survey of the development of the novel in France from the seventeenth to the twentieth centuries.

**FRNC 331 Intermediate French Conversation** 3c-01-3cr

**Prerequisite:** FRNC 202  
Emphasizes development of communication skills, vocabulary, and discourse strategies. Activities include directed conversations, video- and audio-based listening comprehension, and role play and other simulations.

**FRNC 341 French Grammar** 3c-01-3cr

**Prerequisite:** FRNC 202  
Reviews and refines knowledge of French grammatical structure, including question formation, description, comparison, and present and past narration. Emphasizes written expression.

**FRNC 353 Intermediate French Composition** 3c-01-3cr

**Prerequisite:** FRNC 202  
Includes intensive practice in written expression in French. Emphasizes the development of communicative skills as well as knowledge of French structure. Taught in French.

**FRNC 354 Business French** 3c-01-3cr

**Prerequisite:** FRNC 254 or instructor permission  
The study of principles and practices of business communication in French secretarial and administrative procedures with an emphasis on the planning and writing of business letters, reports, and abstracts of articles in business and economics.

**FRNC 370 Introduction to French Literature** 3c-01-3cr

**Prerequisite:** FRNC 341 or 353

Develops French reading skills, to provide tools for literary interpretation of texts, and to introduce major literary works of France and the French-speaking world.

**FRNC 373 French Civilization** 3c-01-3cr

**Prerequisite:** FRNC 202

Covers the historical development of French high culture exclusive of literary genres (i.e., prose, poetry, theater). Presents an overview of political and intellectual history, music, art, and architecture. Certain content areas receive special emphasis at the instructor's discretion.

**FRNC 375 French Literature from Medieval through Seventeenth Century** 3c-01-3cr

**Prerequisite:** FRNC 370

Introduces the major developments in French literature and thought from the Medieval through the seventeenth century. Includes an overview of major French literary genres: novel, poetry, and theater. Readings and discussion are in French.

**FRNC 376 French Literature from Eighteenth through Twentieth Century** 3c-01-3cr

**Prerequisite:** FRNC 370

Introduces the major developments in French literature and thought from the eighteenth century to the present. Includes an overview of major French literary genres: novel, poetry, and theater. Readings and discussion are in French.

**FRNC 390 Teaching Elementary School Content in French and German** 3c-01-3cr

**Prerequisite:** Instructor permission

Explores issues relevant to the teaching and learning of French and German in the elementary school (grades K-8). Current theories of child second-language acquisition are treated. These theoretical foundations form the basis for the development of objectives and activities that integrate the teaching of foreign language and culture with elementary school subject content. Students gain practical experience in planning and implementing lessons, assessing student learning, and selecting materials appropriate to the needs and interests of young learners.

**FRNC 431 Advanced French Conversation** 3c-01-3cr

**Prerequisite:** FRNC 331

Builds on the communication skills acquired in FRNC 331. Focuses on the development of advanced vocabulary and discourse strategies. Activities include in-depth discussion and debate of current events and real-life problems.

**FRNC 432 French Phonetics and Phonology** 3c-01-3cr

**Prerequisite:** FRNC 331 or equivalent

Presents an introduction to the sound system of French and provides training in standard French pronunciation. Examines basic issues on phonological theory and description. Students refine pronunciation of French through classroom practice, oral presentations, and tape recordings.

**FRNC 441 Advanced French Grammar** 3c-01-3cr

**Prerequisite:** FRNC 341

Builds upon previous knowledge of French grammar, with a view to perfecting control of more complex structures. These structures include complex sentences, the subjunctive, hypothetical statements, and passive voice. Emphasizes written expression.

**FRNC 460 Studies in French Literature** 3c-01-3cr

**Prerequisite:** FRNC 375 or 376

Provides a flexibly designed syllabus permitting instructors and students to explore areas of special interest in French literature and culture. Content varies according to the instructor's desired focus for a given semester. Conducted in French or English at the instructor's discretion.

**FRNC 462 Studies in French Language and Linguistics** 3c-01-3cr

**Prerequisite:** FRNC 353 or equivalent

Explores some topic relevant to French language and linguistics. Possible topics include French around the world, history of the French language, French applied linguistics. (Total pages read in French for the course should be more than 150.)

**FRNC 463 Studies in French Culture and Civilization** 3c-01-3cr  
**Prerequisite:** FRNC 353

Aspects of current French culture and civilization are explored and assessed particularly in relation to French governmental and cultural institutions.

**FRNC 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times.

**FRNC 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Provides an opportunity to engage in an in-depth analysis of some topic dealing with the French language and culture through consultation with a faculty member.

**FRNC 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**FRNC 493 Internship** var-3-12cr

**Prerequisite:** One semester of study in France

A supervised field experience in France with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions are matched as closely as possible with the intern's personal interests and professional goals. For more information, contact the director of the Internship Abroad Program.

**FSMR: Fashion Merchandising**

**Department of Human Development and Environmental Studies  
College of Health and Human Services**

**FSMR 110 Introduction to Fashion** 3c-01-3cr

A survey of aesthetic, cultural, sociopsychological, and economic factors related to the meaning and use of clothing for the individual and society.

**FSMR 112 Fundamentals of Clothing Construction** 1c-3l-3cr

Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide an opportunity to solve individual problems in garment structure through the application of principles.

**FSMR 212 Advanced Clothing Construction** 1c-3l-3cr

**Prerequisite:** FSMR 112 or placement (by exam)

Principles of advanced fitting and clothing construction are applied and analyzed. Offered even years, Fall semester.

**FSMR 252 Aesthetics of Fashion** 1c-01-3cr

**Prerequisite:** Sophomore standing

The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation.

**FSMR 262 Fashion Forecasting** 3c-01-3cr

**Prerequisite:** FSMR 110

A study and an analysis of the global fashion society and the trends that emerge. Evolving styles, changes in buying habits, and economic conditions are assessed to predict fashion consumer behavior. An emphasis on the interrelationships among apparel industry segments and the application of fashion theories to the forecasting process.

**FSMR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**FSMR 303 Visual Merchandising** 3c-01-3cr  
Students design and arrange display and selling areas in relationship to merchandising trends and consumer demands. Emphasizes promotion techniques and merchandise sales through effective use of space, design, and color.

**FSMR 314 Textiles** 3c-01-3cr  
**Prerequisites:** CHEM 101 and 102 or SCI 105 and 106  
An interpretation of basic textile knowledge with emphasis on fiber, yarn, fabric structure, coloration, and fabric finishes. Discussions include importance of factors related to consumer information, protection, and satisfaction.

**FSMR 350 Apparel Industry I** 3c-01-3cr  
**Prerequisites:** FSMR 110, completion of 60cr  
Introduces the design, production, and distribution of apparel, including primary textile markets; women's, men's, and children's wear; accessories; fashion centers; retailers of fashion; apparel wholesale selling process; fashion store image; and future trends.

**FSMR 356 Historic Textiles** 3c-01-3cr  
A study of the development of textiles from ancient times to present day with special emphasis on techniques used in constructing historic textiles.

**FSMR 357 Global Issues in Textiles and Apparel** 3c-01-3cr  
**Prerequisite:** ECON 121  
The study of the global textiles and apparel industry with emphasis on the U.S. textile complex and the U.S. market within an international context.

**FSMR 360 Apparel Industry II** 3c-01-3cr  
**Prerequisites:** FSMR 350 and Liberal Studies math requirements  
Introduces the merchandising and promotion of apparel, including organization, buying responsibilities, techniques, and resources: various retail institutions, resident buying offices, apparel dollar planning and control, apparel merchandise assortment planning, apparel buying practices, application of apparel planning and buying, and apparel advertising and promotion.

**FSMR 385 Ready-to-Wear Analysis** 1c-31-3cr  
**Prerequisites:** FSMR 112, 350  
An examination and evaluation of the quality of ready-to-wear apparel through construction, style, fit, marketability, and price.

**FSMR 433 Study Tour** var-1-6cr  
**Prerequisite:** Upper-level standing  
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. May be repeated for a total of 6cr. (Cross-listed as CNSV/INDS 433.)

**FSMR 434 Quality Control in Textiles** 2c-21-3cr  
**Prerequisite:** FSMR 314  
Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis.

**FSMR 453 Flat Pattern Design** 1c-31-3cr  
**Prerequisite:** FSMR 112 or 212  
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, figure analysis, fabric, fit, and construction processes. Offered even years, Spring semester.

**FSMR 456 Historic Costume** 3c-01-3cr  
A chronological study of historic costume from ancient times to the present day with emphasis on the effect of aesthetic, economic, geographic, political, religious, and social factors upon the design of clothing worn.

**FSMR 480 Seminar in Fashion Merchandising** 3c-01-3cr  
**Prerequisite:** Senior standing

Knowledge gained in major and additional requirement courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous coursework, with emphasis upon independent research, analytical thinking, and communication skills.

**FSMR 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**FSMR 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. May be repeated for a total of 3cr. Students meet with a faculty member at least 5 hours per credit.

**GEOG: Geography**  
**Department of Geography and Regional Planning**  
**College of Humanities and Social Sciences**

**GEOG 101 Introduction to Geography: Human Environment** 3c-01-3cr  
Throughout history, human life and society have been shaped by the physical environment. Today, human activity threatens that environment. The relationship between humans and environment is examined in the context of the surface processes of weather, climate, plate tectonics, population distribution, and soil formation. Topics include agriculture, acid rain, global warming, deforestation, desertification, erosion, volcanism, and pollution.

**GEOG 102 Geography of United States and Canada** 3c-01-3cr  
The cultural landscape of North America is studied. The relationship between man and environment is examined and spatial patterns of environment, economy, society, and politics are considered.

**GEOG 103 Cities of the World: Issues in Planning and Development** 3c-01-3cr  
An introduction to the developmental and regional planning issues facing contemporary non-western cities. A theoretical framework sets up detailed case studies of developmental issues affecting urban populations in Africa, Asia, and Central and South America. Issues include such traditional topics as migration, population, poverty, and indigenous and colonial legacies, but environmental and infrastructure problems such as water supply, food security, energy, solid waste, disaster planning, and transportation are also analyzed and discussed. (Also offered as RGPL 103; may not be taken as duplicate credit)

**GEOG 104 Geography of the Non-Western World** 3c-01-3cr  
Relates theories of the discipline of geography to problems in the developing world. Emphasizes geographic components of dependency theory; indigenous-versus-industrial strategies of resource management; world systems theory; spatial legacies of colonialism; and development economics, theories of migration, and urban structure to explore causes, characteristics, and consequences of underdevelopment.

**GEOG 213 Cartography I** 3c-01-3cr  
Introduces principles of thematic map construction. Emphasizes techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as RGPL 213; may not be taken for duplicate credit)

**GEOG 219 Global Positioning System Fundamentals** 1c-01-1cr  
Provides a basic knowledge of the Global Positioning System. The student learns how to use NAVSTAR GPS to locate precise positions on the globe, to plot a course, and to navigate using a handheld global positioning receiver. Civil drafting data may be collected with a GPS receiver and put into the computer to generate plot plans.

- GEOG 230 Cultural Geography** 3c-01-3cr  
An introduction to cultural geography, including population, settlement, historical, urban, and political geography, human relationships with the natural environment, and the literature and methods of cultural geography.
- GEOG 231 Economic Geography** 3c-01-3cr  
An introduction to geographic concepts, methods, and skills related to spatial patterns of production, consumption, and exchange over the earth's surface.
- GEOG 251 Geography of Pennsylvania** 3c-01-3cr  
Regions of Pennsylvania are examined in detail to identify man-environment relationships. Soils, topography, climate, vegetation, population, and economic patterns are studied.
- GEOG 252 Geography of Latin America** 3c-01-3cr  
The impact of rapid population growth and economic development on the environment and spatial organization of Latin America is considered. The resource base and cultural heritage of the region are studied.
- GEOG 253 Geography of Europe** 3c-01-3cr  
Investigates relationships underlying land use, dominant international problems, boundary disputes, and regional complexes of the European continent.
- GEOG 254 Geography of Russia, Central Eurasia, and Eastern Europe** 3c-01-3cr  
Examines the Russian Federation, former Soviet satellites, and the European and Asiatic successor states. The region is the realm of Eurasian languages, historical schisms between eastern and western Europe, and the geographical legacies of the Tsarist and Soviet empires. Topics include terrain and environment, population, economic regions, resources, and geopolitics. These are studied in the context of environmental location and position between Eastern and Western power centers of the twenty-first century.
- GEOG 255 Geography of Africa** 3c-01-3cr  
A systematic survey of the physical, economic, political-historical, and cultural geography of the continent is followed by regional studies of countries and peoples in Africa, south of the Sahara.
- GEOG 256 Geography of East Asia** 3c-01-3cr  
Studies China, Japan, Korea, Outer Mongolia, Taiwan. Geographic background for development and wise use and restoration of natural resources are dealt with.
- GEOG 257 Geography of South and Southeast Asia** 3c-01-3cr  
India, Pakistan, Bangladesh, Sri Lanka, Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, and Indonesia are studied with special attention to regional similarities and differences, particularly as they pertain to human adjustment.
- GEOG 261 Geography of Wine** 3c-01-3cr  
The geography of the grape, its production, products, social significance, and consequences of the global wine trade are explored. Students develop an appreciation for the environmental constraints and characteristics of wines and wine regions. Field trips to visit wineries are an essential element. Verifiable proof of 21 years of age required for voluntary wine-tasting activities.
- GEOG 281 Special Topics** 3c-01-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as RGPL 281; may not be taken as duplicate credit under same title)
- GEOG 313 Cartography II** 3c-01-3cr  
**Prerequisite:** GEOG 213  
Provides an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as RGPL 313; may not be taken for duplicate credit)
- GEOG 314 Map and Photograph Interpretation** 3c-01-3cr  
Maps and air photographs, along with remote sensing materials, permit inventory, and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented. (Also offered as RGPL 314; may not be taken for duplicate credit)
- GEOG 316 Introduction to Geographic Information Systems** 3c-01-3cr  
**Prerequisite:** GEOG 213, or equivalent, or instructor permission  
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) database design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as RGPL 316; may not be taken for duplicate credit)
- GEOG 331 Population Geography** 3c-01-3cr  
Spatial variations in numbers, characteristics, and dynamics of human population, models, and theoretical constructs relevant to demographic structures and processes are studied, as well as major world and regional problems.
- GEOG 332 Urban Geography** 3c-01-3cr  
Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as RGPL 332; may not be taken for duplicate credit)
- GEOG 333 Trade and Transportation** 3c-01-3cr  
Deals with the spatial aspects of transportation systems and their use. Discusses circulation, accessibility, time and distance concepts, and trade patterns. (Also offered as RGPL 333; may not be taken for duplicate credit)
- GEOG 334 Political Geography** 3c-01-3cr  
Geographic factors and conditions are analyzed as they relate to the character and function of states. Political institutions are evaluated in light of geographic conditions.
- GEOG 335 Geography of Energy** 3c-01-3cr  
Covers patterns and problems of energy production and consumption in human societies. Descriptions of what, where, and how much are combined with issues such as technological change, conservation, allocation, environment impacts, and economic development. Topics include global history and trends of energy development, pricing systems, types of energy, locations of production areas, and the energy status of the United States.
- GEOG 336 Social Geography** 3c-01-3cr  
Focuses on spatial dimensions of the American society. The distribution of various social groups and their impact on the landscape are considered.
- GEOG 337 Historical Geography** 3c-01-3cr  
Studies of past geographies, geographical change through time, and historical perspectives on the cultural landscape are included. Historical geography of the United States is emphasized.
- GEOG 341 Climatology** 3c-01-3cr  
Examines the elements of weather and climate on Earth. The location and causes of global climatic regions are examined in relation to moving pressure and wind systems. Also considers the climatic history of the planet and recent human modifications of the atmospheric environment. (Also offered as RGPL 341; may not be taken for duplicate credit)
- GEOG 342 Physiography** 3c-01-3cr  
Focuses on landform types and their spatial distribution. Emphasizes the tectonic forces that build landforms and the weathering and erosional processes that erode and shape surface features. The relationship between human activities and landforms is also considered. (Also offered as RGPL 342; may not be taken for duplicate credit)
- GEOG 343 Geography of Fresh Water Resources** 3c-01-3cr  
Students learn about surface and groundwater as a resource with unique properties. Fresh water is defined physically by storage in the hydrologic cycle



and the values assigned by different cultures. Problems featured relate to consumptive and withdrawal water uses, the problems of water supply and scarcity, water law and its inconsistencies, flooding and floodplain management, sources of contamination and pollution, wetlands, and case studies of selected river basins. (Also offered as RGPL 343; may not be taken for duplicate credit)

**GEOG 345 Biogeography for Environmental Managers 3c-01-3cr**

**Prerequisite:** One of the following: GEOG 341, 342, BIOL 103, 112, 115  
Examines the distribution of plants and animals across the earth's surface, as influenced by natural and human processes. Emphasizes landscape and regional habitat dynamics as they relate to environmental planning and management. Field trips supplement lectures and readings. (Also offered as RGPL 345; may not be taken for duplicate credit)

**GEOG 411 History of Geography 3c-01-3cr**

**Prerequisites:** GEOG 213, 230, 231, and 341 or 342  
Deals with history of the discipline, great ideas, leading problems, and unresolved issues.

**GEOG 411 History of Geography 3c-01-3cr**

**Prerequisite:** GEOG 230  
**Prerequisites or Corequisites:** GEOG 213, 231, 341 or 342  
Deals with history of the discipline, great ideas, leading problems, and unresolved issues.

**GEOG 412 Community Planning Practicum 3c-01-3cr**

**Prerequisite:** RGPL 468  
This senior seminar and workshop constitute a capstone course that focuses on recent research in the major field. Students carry out an applied research project on a topic of local or regional importance. (Also offered as RGPL 412; may not be taken for duplicate credit) (Titled Research Seminar prior to 2011-12)

**GEOG 415 Remote Sensing 3c-01-3cr**

Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as RGPL 415; may not be taken for duplicate credit)

**GEOG 417 Technical Issues in GIS 3c-01-3cr**

**Prerequisite:** GEOG 316  
A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning, students design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as RGPL 417; may not be taken for duplicate credit)

**GEOG 418 Geographic Information Systems (GIS) for Crime Mapping and Social Scientific Analysis 3c-01-3cr**

**Prerequisite:** 60 completed credits or instructor permission  
Provides knowledge of the theoretical basis of Geographic Information Systems (GIS) and its applications for criminologists and other social scientists. In the process of demonstrating some of the capabilities of GIS, the specifics of selected GIS and database software packages will also be covered. Students develop the skills to use GIS packages, manipulate and query geographic data to solve problems, perform simple spatial analysis, and understand how to utilize GIS in law enforcement/social science problem-solving and decision-making processes.

**GEOG 419 Geographic Information Systems (GIS) for Environmental Applications 3c-01-3cr**

**Prerequisite:** 60 completed credits or instructor permission  
Provides knowledge of the theoretical basis of Geographic Information Systems (GIS) and its applications for environmental scientific analysis. In the process of demonstrating some of the capabilities of GIS, the specifics of selected GIS and database software packages will also be covered. Students develop the skills to use GIS packages, manipulate and query geographic data to solve problems, perform simple spatial analysis, and understand how to utilize GIS for environmental analysis and resource management.

**GEOG 421 Enterprise GIS Management 3c-01-3cr**

**Prerequisite:** GEOG 417 or instructor permission  
Principles and methods for creating, operating, maintaining, and managing data for multi-user geospatial information systems are studied. Each student will customize, document, and operate a multi-user geographic information system of his or her design. (Also offered as RGPL 421; may not be taken for duplicate credit)

**GEOG 425 Global Positioning Systems (GPS) Concepts and Techniques 3c-01-3cr**

**Prerequisites:** 60cr completed or instructor permission  
Provides knowledge of the theoretical basis and practical applications of Geographic Positioning Systems (GPS). Students gain hands-on experience using GPS receivers and GPS observables, as well as the ability to determine point and relative position fixes from pseudorange and carrier phase measurements. Students are exposed to industry-standard GPS hardware and software, as well as appropriate techniques for processing GPS data to achieve necessary levels of horizontal and vertical positional accuracy. Integration of GPS and geographic information systems (GIS) will also be discussed.

**GEOG 431 Geography of American Indians 3c-01-3cr**

Focuses on the historical/cultural geography of Native Americans. Population, resources, land use, development, settlement patterns, and other selected topics are covered.

**GEOG 432 Geography of Crime 3c-01-3cr**

The geographical context of crime is examined from historical and contemporary viewpoints. Relevant concepts and analytical approaches are introduced.

**GEOG 440 Conservation: Environmental Analysis 3c-01-3cr**

Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development. (Also offered as RGPL 440; may not be taken for duplicate credit)

**GEOG 464 Land Use Policy 3c-01-3cr**

Introduces and provides an overview of land use issues at the regional, state, and federal levels. Emphasizes the evolution of contemporary policy strategies, constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as RGPL 464; may not be taken for duplicate credit)

**GEOG 481 Special Topics 3c-01-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as RGPL 481; may not be taken for duplicate credit under same title)

**GEOG 482 Independent Study var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**GEOG 483 Honors Thesis var-1-6cr**

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**GEOG 484 Field Studies in Geography and Social Studies var 1-3cr**

**Prerequisite:** Instructor permission  
Immerses the student in a regional environment. Helps the student to see critically and to interpret a cultural landscape. The experience is predomi-

nantly off campus. Using a combination of structured field exercises, culturally specific readings, primary and secondary data, and standard geographic field techniques, the course strives to develop a deeper affective and cognitive understanding of a cultural region. May be repeated under a different study area title.

**GEOG 493 Internship** **var-3-12cr**  
Professional learning experience with emphasis on application of academic background. Open to majors and minors in geography with a total of 60cr and 15cr in the major. See internship supervisor for additional information.

**GEOG 499 Independent Study** **var-3-6cr**  
Independent research and study under faculty direction. Interested students should approach department chairperson for information.

**GEOS: Geoscience**  
**Department of Geoscience**  
**College of Natural Sciences and Mathematics**

**GEOG 101 The Dynamic Earth** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
Examines the constant changes that affect the rocky surface of our planet. From volcanic eruptions and catastrophic earthquakes to the slow drift of continents and passage of ice ages, earth processes have shaped the history of life and altered the development of human civilization.

**GEOG 102 The Dynamic Earth Lab** **0c-21-1cr**  
**Prerequisite:** No GEOS majors/minors  
**Corequisite:** GEOS 101  
Introduces the techniques geologists use to study the earth and reconstruct its past. Labs cover minerals, rocks, map interpretation, fossil identification. Includes field trips during the scheduled lab period.

**GEOG 103 Oceans and Atmospheres** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
The earth's oceans and atmosphere play a crucial role in determining the pace and extent of changes occurring to our global environment. Examines the composition and character of these components and their interaction with other major components of the earth system.

**GEOG 104 Oceans and Atmospheres Lab** **0c-21-1cr**  
**Prerequisite:** No GEOS majors/minors  
**Corequisite:** GEOS 103  
Introduces the techniques oceanographers and meteorologists use to study the earth's oceans and atmospheres and reconstruct their evolution. Labs cover seawater processes, oceanic circulation, marine life, atmospheric structure, and weather.

**GEOG 105 Exploring the Universe** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
Examines the history of time, the reasons for the seasons, the characteristics of the planets, moons, stars, and galaxies, and the history and future of space exploration.

**GEOG 106 Exploring the Universe Lab** **0c-21-1cr**  
**Prerequisite:** No GEOS majors/minors  
**Corequisite:** GEOS 105  
Introduces the techniques astronomers use to study the celestial sphere. Constellations, seasons, motions of Sun, Moon, planets, and stars, characteristics of stars and galaxies. Includes two observations which are held at night.

**GEOG 150 Geology of National Parks** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
Explores geological processes and earth history using the classic rock formations of America's national parks. Includes national parks such as Arches, Bryce Canyon, Carlsbad Caverns, Grand Canyon, Great Smokies, Mammoth Cave, Shenandoah, Yellowstone, Yosemite, Zion, and others. (Offered as GEOS 250 during 2009-2010)

**GEOG 151 The Age of Dinosaurs** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors

A thorough introduction to dinosaurs and the world they inhabited. Topics include the most current theories regarding dinosaur biology (behavior, metabolism, evolution), ecology (greenhouse climate, associated plants and animals), and extinction (asteroid impact, volcanism, climate change). (Offered as GEOS 251 during to 2009-2010)

**GEOS 152 Physical Resources of the Earth** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
An introduction to mineral, energy, and water resources of the earth; genesis of ore depositions; exploration, exploitation, and utilization of resources; impact of exploitation of resources on the environment and on humankind. (Offered as GEOS 221 prior to 2009-2010 and GEOS 252 prior to 2010-2011)

**GEOS 153 Forensic Geology** **3c-01-3cr**  
**Prerequisite:** No GEOS majors/minors  
An introduction to the use of geological information in criminal investigation. Emphasizes the use of geochemistry, geochronology, geophysics, and soil characteristics in tracing the origins and history of criminal evidence as well as the development of new techniques for authenticating artifacts and art. (Offered as GEOS 226 prior to 2009-2010 and GEOS 253 prior to 2010-2011)

**GEOS 154 Exploration of Space** **3c-0-3cr**  
**Prerequisite:** No GEOS majors/minors  
Covers the history, technical considerations, and scientific and social issues of the exploration of the planets and smaller objects of the solar system. Early rocketry, the race to the Moon, and past robotic missions provide a perspective to consider current and future science missions and human settlement beyond Earth. Includes field observations and activities that may occur on evenings and weekends. (Offered as GEOS 254 prior to 2010-2011)

**GEOS 201 Foundations of Geology** **3c-31-4cr**  
**Prerequisite:** GEOS majors/minors, Science or Science Education majors/minors, ANTH, GEOG, and RGPL majors, or instructor permission  
An introduction to the geological sciences, including the study of the earth's interior; plate tectonics; minerals and crystallography; igneous, sedimentary, and metamorphic rocks and their cycling, geologic time; crustal deformation; and earthquakes. Laboratory exercises emphasize hands-on learning of basic geology skills, including mineral and rock identification, understanding the geometry of subsurface geologic structures, and topographic and geologic map reading.

**GEOS 202 Quantitative Methods in the Geoscience** **2c-01-2cr**  
**Prerequisites:** GEOS or Earth and Space Science majors/minors only, or instructor permission; must be taken after or concurrently with GEOS 201  
A quantitative introduction to the geological sciences, including the study of the Earth's interior; plate tectonics; minerals and crystallography; igneous, sedimentary, and metamorphic rocks and their cycling; geologic time; crustal deformation; and earthquakes. Introduces students to foundational mathematical skills and techniques used in the geosciences.

**GEOS 203 Surficial Processes** **3c-31-4cr**  
**Prerequisite:** Grade of C or better in GEOS 201  
Introduces the geological processes which shape the Earth's surface, from uplift and erosion of mountains to the transport of sediment and subsequent formation of sedimentary rocks. Focuses are on the interaction of underlying tectonic forces with the natural cycles of the Earth's atmosphere and hydrosphere and the subsequent evolution of both landscape and surface deposits.

**GEOS 281 Special Topics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GEOS 301 Mineralogy and Petrology** **3c-31-4cr**  
**Prerequisites:** Grade of C or better in GEOS 201 and 202

Introduces crystallography, crystal chemistry, optical properties and phase equilibria of minerals pertinent to geology, Earth resources, and technology. Introduces the origins of igneous and metamorphic rocks based on a plate tectonic framework emphasizing melting and crystallization processes as well as metamorphic reactions. Laboratory exercises focus on mineral and rock identification and interpretation as well as quantitative techniques such as x-ray diffractometry and optical microscopy.

**GEOS 302 Structural Geology** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202

A study of the geometry, kinematics, and dynamics of the primary structures of the Earth's crust. Focuses on the geometric relations between geologic contacts and surface topography, the description of primary structures such as foliations, lineations, folds and fractures, the constraints on crustal motions, and the relation between stress and strain. Students are introduced to the tools of rock mechanics and spherical geometry. The laboratory includes extensive work with geologic maps and profiles, the Brunton compass, and orthographic and stereographic projections. Includes field trips which may occur on weekends. (Offered as GEOS 325 prior to 2009-2010)

**GEOS 303 Field Geology** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202

Principles and techniques of field geology with an emphasis on developing field skills using a Brunton compass, topographic maps, Jacobs staff, stereographic projections, field computers, and the Global Positioning System. Field projects involve techniques of field note-taking, measuring and describing stratigraphic sections, bedrock mapping and analysis, environmental assessment, and construction of geologic maps and structure sections. Includes field trips which may occur on weekends. (Offered as GEOS 326 prior to 2009-2010)

**GEOS 310 Environmental Geology** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

The study of human interactions with the Earth from a geological perspective. An emphasis is placed on the scientific concepts necessary to understand these interactions, including groundwater flow, soil formation and destruction, waste disposal, geologic hazards, stream hydrology, climate change, and natural resources. Contemporary environmental issues are explored through primary scientific literature and news media. Includes field trips which may occur on weekends.

**GEOS 311 Geochemistry** 3c-3I-4cr

**Prerequisites:** CHEM 111, Grade of C or better in GEOS 201 and 202

An introduction to low-temperature chemistry of the earth's surface and near-surface; includes discussions of chemical activity, solution chemistry, organic geochemistry, trace elements, stable and radiogenic isotope geochemistry, and the chemistry of natural waters. (Offered as GEOS 332 prior to 2009-2010)

**GEOS 312 Hydrogeology** 3c-0I-3cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202; MATH 121 or 125 or instructor permission.

An overview of groundwater geology, including flow equations, graphical solutions to flow problems, and computer modeling of flow systems, as well as the geotechnical and social implications of groundwater utilization. Field trips may occur on weekends. (Offered as GEOS 331 prior to 2009-2010)

**GEOS 313 Soils and Soil Geochemistry** 2c-3I-3cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202

An introduction to the formation, classification, and geochemistry of soils. Emphasizes geology, climate, hydrology, and plant-soil interactions to investigate soil evolution and fertility, nutrient dynamics, and the role of soils in the global carbon cycle. Laboratory topics include assessment of soil structure, mineralogy, chemistry, and fertility as well as quantitative treatment of carbon cycling in soils. Includes field trips which may occur on weekends. (Offered as GEOS 333 prior to 2009-2010)

**GEOS 323 Geophysics** 3c-3I-4cr

**Prerequisites:** PHYS 111, MATH 121, grade of C or better in GEOS 201 and 202

An introduction to physics of the surface and interior of the solid Earth including earthquakes, propagation of earthquake waves, gravity field and

interior structure, magnetic field and magnetic reversals, heat flow, geodesy, and tides. Techniques used for applied geophysical surveys are also examined.

**GEOS 324 Geology of Oil and Gas** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

An in-depth exploration of the geological processes that create oil and gas resources in sedimentary rocks. Students also learn specific techniques used in the oil and gas industry for locating and extracting oil and gas reserves and study the environmental impacts caused by their development. Students will also gain an understanding of the limited nature of fossil fuels.

**GEOS 341 Planetary Geology** 3c-3I-4cr

**Corequisites:** MATH 121, PHYS 111 or instructor permission

Materials, motions, and evolution of the solar system, with an emphasis on observational methods, mechanics, spatial relationships, geology, and origin of the solar system.

**GEOS 342 Stellar Astronomy** 3c-3I-4cr

**Prerequisites:** MATH 121, PHYS 111 or instructor permission

Evolution and nature of objects in the universe, including the Sun, stars, and galaxies. A study of methods for gathering astronomical data on motion, distance, and composition.

**GEOS 351 Historical Geology** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

An introduction to the historical development of geology as a scientific discipline and a review of the major global events in Earth's history and the methods employed in reconstructing the geologic history of regions and continents. (Offered as GEOS 131 prior to 2009-2010)

**GEOS 352 Sedimentation and Stratigraphy** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

An introduction to the concepts and methods applied in defining and establishing the spatial and temporal relationships of stratigraphic units—the material packages of sediment/rock and the intervals of time that are derived from them. Includes field trips that may occur on weekends. (Offered as GEOS 412 prior to 2009-2010)

**GEOS 353 Paleontology** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202

An introduction to the study of prehistoric life, the process and products of organic evolution, and the utility of fossils as tools for solving geological and paleobiological problems. Includes field trips which may occur on weekends. (Offered as GEOS 330 prior to 2009-2010)

**GEOS 354 Geomorphology** 2c-3I-3cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

A study of the origin of the earth's landforms, including relationship of geologic structure to landform types and role of geomorphic processes in landscape development. (Offered as GEOS 327 prior to 2009-2010)

**GEOS 355 Sedimentary Petrology** 2c-3I-3cr

**Prerequisites:** Grade of C or better in GEOS 202 and 203

The study of sediments and sedimentary rocks with emphasis on interpreting ancient environments of deposition utilizing sieve analysis, hand lens, and petrographic microscope. Includes field trips which may occur on weekends. (Offered as GEOS 411 prior to 2009-2010)

**GEOS 362 Plate Tectonics** 2c-3I-3cr

**Prerequisites:** PHYS 111-112 and a minimum of 20cr of geology

An introduction to formal theory of plate tectonics. Topics include magnetic anomalies, first motion studies, thermal structures of the plates, kinematics, crustal generation, sea floor spreading, collision, and subduction deformation.

**GEOS 370 Oceanography** 3c-3I-4cr

**Prerequisites:** Grade of C or better in GEOS 201 and 202

An introduction to physical, chemical, geological, and biological nature of the ocean: bathymetry, submarine geology, and sedimentary deposits. Includes field trip(s) which may occur on weekend(s). (Offered as GEOS 361 prior to 2009-2010)

**GEOS 371 Meteorology** 2c-3l-3cr**Prerequisites:** Grade of C or better in GEOS 201 and 202

An introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.

**GEOS 401 Northern Rockies Seminar** 1c-0l-1cr**Prerequisites:** Grade of C or better in GEOS 201 and 202; instructor permission required

A seminar introduction to the geology and tectonic history of the northern Rocky Mountains. Includes instruction in the techniques of field mapping and geologic interpretation. Prepares students specifically for GEOS 402.

**GEOS 402 Northern Rockies Field Workshop** var-3cr**Prerequisites:** GEOS 401; instructor permission required

A field study of the major geologic features and relationships involved in the development of the northern Rocky Mountains. National Park and Monument areas of South Dakota, Wyoming, and Montana are included among the areas investigated. (Three weeks, taught in the summer only) (Offered as GEOS 336 prior to 2009-2010)

**GEOS 403 Newfoundland Seminar** 1c-0l-1cr**Prerequisites:** Grade of C or better in GEOS 201 and 202; instructor permission required

A seminar introduction to the geology and tectonic history of Newfoundland and Labrador. Includes instruction in the methods and concepts employed in delineation and genetic interpretation of stratigraphic units. Prepares students specifically for GEOS 404.

**GEOS 404 Newfoundland Field Workshop** var-3cr**Prerequisites:** GEOS 403; instructor permission and valid passport required

A field course designed to utilize the exceptional and diverse geologic features of Newfoundland for instruction of departmental majors and minors in the tectonic analysis utilizing sedimentologic, stratigraphic, and paleontologic observations. (Three weeks, taught in the summer only) (Offered as GEOS 337 prior to 2009-2010)

**GEOS 405 American Southwest Seminar** 1c-0l-1cr**Prerequisites:** Grade of C or better in GEOS 201 and 202; instructor permission required

A seminar introduction to the geology of the American Southwest. Includes examination of Colorado Plateau stratigraphy, Basin and Range tectonism, and volcanic events in the eastern Sierra Nevada. Prepares students specifically for GEOS 406.

**GEOS 406 American Southwest Field Workshop** var-3cr**Prerequisites:** GEOS 405; instructor permission required

A field study of the major geologic features and relationships exposed in the American Southwest, including the Colorado Plateau, the Rio Grande Rift, Death Valley, and parts of the eastern Sierra Nevada in California. (Three weeks, taught in the summer only) (Offered as GEOS 338 prior to 2009-2010)

**GEOS 407 Carbonate Geology Seminar** 1c-0l-1cr**Prerequisites:** Grade of C or better in GEOS 201 and 202; instructor permission required

A seminar introduction to the geological environment and history of the carbonate rocks and sediments found in Florida. Includes instruction in the techniques of field analysis and geologic interpretation. Prepares students specifically for GEOS 408.

**GEOS 408 Carbonate Geology Field Workshop** var-3cr**Prerequisites:** GEOS 407; instructor permission

Two to three weeks of field study in Florida Keys and at Andros Island, Bahamas. Conducted from base camps in Florida Keys and at Forfar Biological Field Station (Bahamas) and consists of both land and marine studies of the different carbonate environments in the Keys, Florida Bay, and along the Atlantic reef tract. Valid passport and basic swimming skills required. (Offered as GEOS 441 prior to 2009-2010)

**GEOS 470 Research Methods in the Geosciences** 2c-0l-2cr**Prerequisite:** 75cr or instructor permission

For students enrolled in all majors within the GEOS Department. Students learn the methods of research in the geosciences by working on a project of their choosing. Students define a problem, propose several hypotheses, collect data, and perform a quantitative analysis to test their hypotheses and propose a solution. Final results are submitted in professional manuscript form. As preparation, students examine various geoscience problems and data sets through the semester. Cannot be taken subsequent to GEOS 480. (Offered as GEOS 380 prior to 2009-2010)

**GEOS 480 Geoscience Seminar** 2c-0l-2cr**Prerequisites:** GEOS 470, senior standing

For seniors majoring in some aspect of geoscience. The seminar 1) provides an opportunity to prepare, formally present, and defend a scientific paper based either on his/her own research or on a topic chosen with the approval of instructor and 2) provides opportunity to discuss topics presented by other students, faculty, or guests.

**GEOS 481 Special Topics** var-1-3cr**Prerequisite:** As appropriate to course content

The department's intention is to use this course to schedule extended field trips and for teaching special courses which utilize the specialties of the Geoscience faculty.

**GEOS 482 Independent Study** var-1-3cr**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Independent study provides the student with an opportunity to use library, laboratory, or field research in an area which is of interest under the supervision of a designated faculty member. Approval is based on academic appropriateness and availability of resources.

**GEOS 493 Geoscience Internship** var-1-12cr

Summer or semester work experience with cooperating firms or agencies.

May be scheduled only after consultation with advisor and chairperson. Requirements include up to three on-site consultations, depending on credits and location's site; completion of up to three oral progress reports; and submission of a detailed work diary. Restricted to junior and senior department majors; only 3cr may be applied toward major.

**GERN: Gerontology****Department of Nursing and Allied Health Professions****College of Health and Human Services****GERN 281 Special Topics** var-1-3cr**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GERN 481 Special Topics** var-1-3cr**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GERN 482 Independent Study** var-1-3cr**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**GERN 493 Internship** 3cr**Prerequisites:** Senior standing, all required courses

Supervised experience in public or private agency that serves aging clients.

**GRMN: German**  
**Department of Foreign Languages**  
**College of Humanities and Social Sciences**

**GRMN 101 Elementary German** var 6cr  
 Complete levels I and II sequence in one semester (6cr). Emphasizes the mastery of spoken language as well as basic language skills. Classes meet M/W/F for 60 minutes and T/R for 90 minutes.

**GRMN 151 German I** 3c-01-3cr  
 For beginners, the objectives include grammar, pronunciation, reading, speaking, and writing.

**GRMN 152 German II** 3c-01-3cr  
 German I or its equivalent, the objectives are to enhance and develop the four skills of listening, speaking, reading, and writing.

**GRMN 201 Intermediate German** var 6cr  
 Complete levels III and IV sequence in one semester (6cr). Students develop language skills with emphasis on oral competency. Classes meet M/W/F for 60 minutes and T/R for 90 minutes.

**GRMN 221 Conversation III** 2c-01-2cr  
 Two-hours-weekly conversation practice in small groups emphasizing the use of greetings, idiomatic expressions, and communication skills to improve vocabulary and pronunciation.

**GRMN 222 Conversation IV** 2c-01-2cr  
 Two hours of weekly conversation designed as a continuation of the practice in small groups, focusing on speaking and listening skills and on participation in discussions and dialogues. Students may enroll without having taken GRMN 221.

**GRMN 251 German III** 3c-01-3cr  
 Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest.

**GRMN 252 German IV** 3c-01-3cr  
 A continuation of German III with some emphasis on literary works.

**GRMN 253 Intermediate Composition and Conversation** 3c-01-3cr  
 Can be taken instead of or in addition to 252. For majors or serious students. Taught Spring semester only.

**GRMN 254 Business German** 3c-01-3cr  
**Prerequisite:** GRMN 251 or equivalent  
 A one-semester course which can be taken instead of, or in addition to, GRMN 252 by students interested in business or as part of the Liberal Studies requirement (equivalent to German IV). Business practices and specialized business vocabulary, letter writing, and problems of translation are emphasized.

**GRMN 256 Scientific German** 3c-01-3cr  
 Substitutes for GRMN 252, offered in the second semester. Primarily for science majors; may be taken as an elective by GRMN majors.

**GRMN 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**GRMN 321-322 Advanced Conversation I and II** each 2c-01-1cr  
 Increases speaking ability. The variety of content permits repetitions of these relatively informal courses.

**GRMN 351 Advanced German Language I** 3c-01-3cr  
 Aims to review and expand the student's grammatical skills, to apply these skills to extensive cultural and short literary readings, and to produce frequent themes on these readings.

**GRMN 352 Advanced German Language II** 3c-01-3cr  
 Continues to expand the student's grammatical skills and to apply them by the writing of longer themes based on cultural and literary readings.

**GRMN 361 Development of German Culture and Literature I** 3c-01-3cr  
 Provides a background in German literature, music, art, architecture, and history. Surveys the period from the migrations of the Germanic tribes to the rise of Prussia as a European power.

**GRMN 362 Development of German Culture and Literature II** 3c-01-3cr  
 A continuation of GRMN 361. Covers the period from the French revolution and its effects on Germany up to the present, with an emphasis on German literature, history, and music.

**GRMN 363 Introduction to German Literature I** 3c-01-3cr  
 Selected readings in German poetry to acquaint the student with formal and thematic aspects of German verse from the Middle Ages to the present.

**GRMN 364 Introduction to German Literature II** 3c-01-3cr  
 Selected readings in German fiction and drama to acquaint the student with representative works and techniques of interpretation.

**GRMN 367 Nineteenth-Century German Literature** 3c-01-3cr  
 A survey of the major works of German poetry and prose with an emphasis on the literary movements of Romanticism, Realism, and Naturalism.

**GRMN 368 Twentieth-Century German Literature** 3c-01-3cr  
 A study of representative works of German poetry and prose from Expressionism through World War II.

**GRMN 369 Contemporary German Literature** 3c-01-3cr  
 A study of the literary achievement of postwar Germany up to the present.

**GRMN 370 The Age of Goethe I** 3c-01-3cr  
 A study of representative works from the Enlightenment and Storm and Stress periods.

**GRMN 371 The Age of Goethe II** 3c-01-3cr  
 A study of selected works of German Classicism with an emphasis on the prose and poetry of the first decades of the nineteenth century.

**GRMN 381 German Drama in English Translation** 3c-01-3cr  
 Representative works of major dramatists in English translation. Primarily intended for students of English literature and comparative literature and not considered as credit toward a GRMN major.

**GRMN 390 Teaching Elementary School Content in French and German** 3c-01-3cr  
**Prerequisite:** Instructor permission  
 Explores issues relevant to the teaching and learning of French and German in the elementary school (grades K-8). Current theories of child second-language acquisition are treated. These theoretical foundations form the basis for the development of objectives and activities that integrate the teaching of foreign language and culture with elementary school subject content. Provides practical experience in planning and implementing lessons, assessing student learning, and selecting materials appropriate to the needs and interests of young learners.

**GRMN 410 History of the German Language** 3c-01-3cr  
 History and development of German language, with special emphasis on relationships with English. Analysis of annals in Gothic, Old High German, and Middle High German using methods of historical and contemporary linguistics.

**GRMN 481 Special Topic** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. Designed to meet the special needs of a student group.

**GRMN 482 Independent Study** **var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Provides an opportunity to engage in an in-depth analysis of some topic dealing with the German language and culture through consultation with a faculty member.

**GRMN 493 Internship in Germany** **var-3-12cr**

**Prerequisites:** 12cr in 300- or 400-level courses and a minimum of one-semester study in Germany  
A supervised field experience in Germany with approved public agencies and institutions or private firms, no longer than one semester and no less than one month. Positions are matched as closely as possible with the intern's personal interests and degree of proficiency in the German language. Academic work at the Gesamthochschule in Duisburg must precede the internship. Open to students in other disciplines, such as Political Science, International Relations, Business, etc., with advisor approval.

**HBUS: Honors Business****Eberly College of Business and Information Technology****HBUS 101 Contemporary Business Issues** **3c-01-3cr**

**Prerequisite:** Admission to College of Business Honors Program  
An honors-level course in the Eberly College of Business and Information Technology enables eligible students to participate in advanced study in the freshman year. Provides the foundation of the integrative nature of the college's majors by including seminar meetings discussing contemporary business issues with local, regional, and national alumni business leaders; research mentoring with college faculty and businesspeople; opportunities to provide service to the college, university, and the community; and the beginning of an electronic portfolio. Serves as the introduction to the college's honors program that also includes a sophomore cluster, an honors junior block, and an honors senior capstone course.

**HIST: History****Department of History****College of Humanities and Social Sciences****HIST 195 The Modern Era** **3c-01-3cr**

Interprets the development of two centers of civilization, Europe and America, within a global context and extends from at least the Age of Enlightenment through the present. (HIST majors should substitute HIST 202 for 195 to meet the Liberal Studies humanities requirements.)

**HIST 200 Introduction to History** **3c-01-3cr**

For HIST majors and concentrates. Topics include philosophy of history, important schools of history and historians, and methods of historical research. The student is encouraged to become a better historian and to identify with historical profession. For HIST majors only.

**HIST 201 Western Civilization Before 1600** **3c-01-3cr**

A survey course presenting in various forms the origin and development of major political, social, religious, and intellectual institutions in Western Civilization to approximately 1600. For HIST majors or by instructor's permission.

**HIST 202 Western Civilization Since 1600** **3c-01-3cr**

Development of Western civilization from the expansion of Europe to the present, including political, diplomatic, economic, social, and cultural areas. Introduces issues and interpretations encountered in upper-level courses. For HIST majors or by instructor's permission.

**HIST 203 United States History for Historians** **3c-01-3cr**

**Prerequisite:** HIST majors or instructor permission  
Introduces aspiring historians to United States history since 1763. Emphasizes the issues, methods, and problems that currently concern professional historians.

**HIST 204 United States History to 1877** **3c-01-3cr**

**Prerequisite:** HIST, HIST/PLAW, or SSED majors  
An introduction to United States history from the Colonial period through Reconstruction, covering such main currents as the founding of American

society, the American Revolution, the making of the Constitution, the market revolution, westward expansion, slavery, the Civil War, and Reconstruction.

**HIST 205 United States History Since 1877** **3c-01-3cr**

**Prerequisite:** HIST, HIST/PLAW, or SSED majors  
An introduction to United States history, 1877 to the present, covering such main currents as industrialization, Progressivism, World War I, the Great Depression and New Deal, World War II and the Cold War, the 1960s, the Vietnam War, and post-Vietnam political, social, and economic developments.

**HIST 206 History of East Asia** **3c-01-3cr**

History of China and Japan from ancient times, Buddhism, medieval Japan, Chinese communism, industrialization. Some consideration of peripheral Asia from 1500. Open to HIST and non-HIST majors.

**HIST 208 Survey of Latin American History** **3c-01-3cr**

A survey course presenting in various forms the origin and development of major political, social, cultural, religious, and intellectual institutions in Latin America from pre-Columbian times to the present. Introduces issues and interpretations encountered in upper-level courses. Open to HIST and non-HIST majors.

**HIST 210 Ancient Civilization: The Middle East and the Eastern Mediterranean** **3c-01-3cr**

Not open to HIST and SSED majors. An examination of the development and the spread of ancient civilization in ancient Middle East and the Eastern Mediterranean. Topics of study include the characteristics of civilization and the development of political, social, economic, and cultural institutions in the river valley centers and the diffusion to the fringe areas.

**HIST 212 Ancient and Medieval Europe** **3c-01-3cr**

Not open to HIST and Secondary SSED majors. An examination of the development of civilization in Europe during the ancient and medieval periods. Focuses on the Ancient Greek and Roman civilizations and the medieval European civilization. The characteristics and institutions of civilization are stressed as well as the political history.

**HIST 214 Themes in American History** **3c-01-3cr**

**Prerequisite:** HIST 195  
Open only to non-HIST majors. Gives an appreciation of the basic themes and issues in the making of American society. Examines themes such as the fruition of democracy, the American dream, slavery and freedom, the tensions between liberty and order, and the role of the United States in a world setting.

**HIST 251 United States Military History** **3c-01-3cr**

**Prerequisite:** Not applicable toward the HIST major  
A survey of the history and transformation of the American military from the Colonial period to the present time. American military history is analyzed within the context of the nation's political, social, economic, and cultural development. Central themes include war-making, civil-military relations, and military professionalism.

**HIST 279 The Digital Historian** **1c-01-1cr**

**Prerequisite:** HIST and SSED/HIST majors  
An introduction to the changes that digital technologies are bringing to how historians research, write, present, and teach the past. Examines literature on this media and studies closely the state of digital historical work by scholars, teachers, archivists, museum curators, and popular historians. As they examine this work, students also explore the fundamental philosophical and ethical issues raised by efforts to put history on line. Also provides a basic introduction to some of the most common software used by historians to create digital history.

**HIST 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

- HIST 301 History of Ancient Greece** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Analyzes major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.
- HIST 302 History of Ancient Rome** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Traces Roman history from early Republic down to fall of Empire. Roman political theory is particularly emphasized.
- HIST 303 Medieval Europe I, 400-1000** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages; emphasis on political, social, economic, religious, and intellectual developments.
- HIST 304 Medieval Europe II, 1000-1300** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.
- HIST 305 Renaissance and Reformation** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 History of Europe from c. 1250; rise of commercial city, kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.
- HIST 306 Early Modern Europe** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society; French Revolution.
- HIST 307 History of Europe: 1815-1914** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 The study of Europe in nineteenth century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.
- HIST 308 Twentieth-Century Europe** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war and search for security.
- HIST 310 Making Italy Modern** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Surveys the principal themes in the transformation of Italian cultural, social, economic, and political structures since the nineteenth century. Topics include Italian unification; the growth of national culture; the development of a modern state, economy, and society; Italy's role in the Mediterranean; Italian emigration throughout the world; the impact of modernity; Fascism and Anti-Fascism; and Italy in the post-World War II era.
- HIST 311 Rise and Fall of Hitler's Empire** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 An in-depth study of Hitler and the Nazi order; offers an analysis of nineteenth-century origins of Nazi ideology and intensively analyzes domestic and foreign totalitarian policy (1920-1945), including Holocaust, Resistance, and the postwar Nuremberg Trials.
- HIST 312 Europe, 1914-1945: The Age of Dictators and Imperiled Democracies** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Surveys the principal themes in the transformation of Europe from 1914 to 1945. Topics include World War I and the Paris Peace settlement; developments in conservatism, liberalism, and socialism; colonial empires; the emergence of communism, fascism, and Nazism; artistic, musical, and literary movements between the two World Wars; the Great Depression and responses to it; anti-Semitism and the Shoah; the Spanish Civil War, appeasement, and World War II; and the seeds of decolonization and the Cold War.
- HIST 313 Europe Since 1945: Division, Revolution, and Unity** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Surveys the principal themes in European history since 1945. Topics include postwar reconstruction, the origins of the Cold War in Europe, the long years of economic growth followed by stagnation, decolonization of the British and French empires, the events of 1968 and their consequences, the experience of communism in the East Bloc, the revolutions of 1989, and progress toward European integration.
- HIST 320 History of England to 1688** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to seventeenth-century conflict between Crown and Parliament.
- HIST 321 History of England, 1688 to Present** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A survey of the growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution and to imperial expansion and England's role in twenty-first-century world. Attention given to social and cultural history.
- HIST 322 French Revolution and Napoleon** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Brief sketch of Old Regime, concentration on Revolution and Empire, with emphasis on politics, social structure, diplomacy, and economics.
- HIST 323 France, 1815 to the Present** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A survey of French history from the end of the Napoleonic era to the present. Pays special attention to the revolutionary tradition in politics, changes in the lives of workers and peasants, the French experience in the two world wars, and recent social and political trends.
- HIST 324 History of Germany to 1848** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 The study of the development of Germany politically and culturally from ancient times, emphasizing medieval and early modern periods to 1849.
- HIST 325 History of Germany: 1849 to the Present** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 The study of the political and cultural development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to post-World War II East and West Germany.
- HIST 326 History of Russia** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A general survey of Russian history, culture, and institutions. Special consideration given to the study of historical forces formative of Revolution of 1917.
- HIST 327 Soviet Union and Contemporary Russia** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Analyzes the period from 1855 to the present, including the attempts at modernization by Imperial Russia, the creation of the Soviet Union and further modernization, and the collapse of the Soviet Union.
- HIST 329 The History of the Byzantine Empire** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 An introduction to early Byzantine civilization and history, A.D. 400-1300. Traces the transformation of the ancient world and the emergence of a distinctly medieval Byzantine civilization.
- HIST 330 History of the Islamic Civilization** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 An approach to learning about a non-Western culture: Muhammad, Arabs, and Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions of Islam and their interrelationships within Middle East.
- HIST 331 Modern Middle East** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A survey of changes that have taken place in Middle East and in Islam since eighteenth century and of contemporary problems in that region.

**HIST 332 History of Early China 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

China from the dawn of history to the Tang Dynasty. Focuses on the creation of the intellectual and political systems that have dominated China and East Asia down to the present. Looks in depth at the origins of Chinese philosophy and the imperial system.

**HIST 334 History of Modern China 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

The history of China from the late Ming to the present. The Late Imperial political economic and social systems and the problems they faced in the nineteenth century. Reforming China from Self-Strengthening to Mao. Revolutionary society and its discontents. The Reform era and China today.

**HIST 337 History of Modern Japan 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

The history of Japan from the beginning of the Tokugawa period to the present. Japan's early modern political, economic, and social systems, their transformation in the Meiji era, and the Japanese people's struggles and successes in the twentieth century.

**HIST 340 Colonial America 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A survey of original thirteen states from their inception as colonies within the British empire to 1763, the eve of Independence. Attention is given to their political development; economic position within the empire; relations with Indians; and evolution of social, educational, and religious life.

**HIST 341 American Revolution 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

An examination of Whig-Tory participants of American Revolution. Examines events from 1763 to 1783. Changing interpretations of the causes and effects of the revolution are discussed.

**HIST 342 The Early Republic 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A survey of United States history from 1783 to 1850, with special attention on constitutional, political, economic, and social trends.

**HIST 343 Civil War and Reconstruction 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

The study of the failure of American democracy to cope with issues of mid-nineteenth century, followed by political, economic, military, and social developments during war and reconciliation of North and South.

**HIST 344 Industrializing America 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A study of the industrial revolution and its consequences in America through 1917. Topics include new technology and entrepreneurship, the development of middle and working class consciousness, immigration and ethnicity, gender, urban growth, the beginnings of consumer culture and commercialized leisure, intellectual developments, protest movements, and the Progressive Era's political reforms.

**HIST 345 America in War and Depression, 1914-1945 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A study of the social, economic, political, and cultural response to war and depression in America. Topics include the First World War, the 1920s, the Depression, the New Deal, and the Second World War.

**HIST 346 Recent United States History 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Examines the major political, economic, social, and cultural changes in America since 1945 with a focus on their causes, character, and significance; also explores the role of the United States in global relations.

**HIST 350 History of Latin America: Colonial Period, 1450-1820 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.

**HIST 351 History of Latin America: National Period, 1820-Present 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A study of the history of nations which have emerged since independence; emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the hemisphere.

**HIST 355 African History I: Antiquity to 1600 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A survey of the sociocultural, political, and economic life of precolonial African societies. Focus is on ancient kingdoms and cultures, precolonial states, internal and Atlantic trade networks.

**HIST 356 African History II: 1600 to Present 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

A survey of African sociocultural, political, and economic developments during the colonial and modern periods. Covers imperialism, the struggle for control for Africa, the two global wars and their repercussions for Africa, decolonization, and modern African states.

**HIST 360 History of Pennsylvania 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions and problems.

**HIST 361 History of American Diplomacy, 1775-1900 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Traces foreign relations of the United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.

**HIST 362 History of American Diplomacy, 1900-present 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Treats primarily our twenty-first-century involvement in world affairs and domestic debate over that involvement. Special emphasis is on the role of interest groups and increasing power of Executive Department over foreign affairs.

**HIST 363 Thought and Culture in Early America 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic movement.

**HIST 364 Thought and Culture in Modern America 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.

**HIST 365 History of Black America Since Emancipation 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Description and analysis of the role of blacks in the history of the United States since the Civil War; emphasis on key leaders, major organizations, leading movements, and crucial ideologies of blacks in modern America.

**HIST 366 African-American Women 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

Major economic, social, and political issues which have affected black women since their introduction into North America to the present.

**HIST 367 Native American History 3c-01-3cr**

**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)

An unfamiliar perspective on a familiar tale. Presents the "new Indian History"—North America from Native American materials and points of view. Identification, analysis, and synthesis of Indian realities and options over time are at the heart of this course.



- HIST 369 Women in America** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A study of the activities of women from the colonial era to the modern era—evaluating cultural, societal, religious, economic, and political frameworks. Reviews women’s involvement in movements for feminism, social reform, unionism, and the abolition of slavery.
- HIST 370 Religion in America** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 A history of religious belief and practice in the United States from the colonial period to the present, with an emphasis on the last one hundred years.
- HIST 372 History of the Early American Working Class** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Description and analysis of the nature and significance of the working class of the United States in the eighteenth and nineteenth centuries. The work settings and communities of workers are examined as well as unions such as the National Labor Union and the Knights of Labor.
- HIST 373 History of the Modern American Working Class** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Description and analysis of the nature and significance of the working class of the United States in the twenty-first century. Work settings and strikes are examined and analyzed as well as unions such as the United Mine Workers and the United Auto Workers and labor leaders including Samuel Gompers, John L. Lewis, and George Meany.
- HIST 374 History of Organized Crime** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Studies the relationship between urban, entrepreneurial crime and the evolution of industrial America.
- HIST 390 History of Women–World Cultures** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Explores religious, legal, political, economic, and mythic dimensions of women in society from ancient to modern times, including Western and non-Western experiences.
- HIST 391 Film as History** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 Particularly concerned with probing the relationship between cinema and society. History of film is explored and student is given some background in film interpretation and cinematography, the western, science fiction, police films, and great foreign and American detective films.
- HIST 394 Introduction to Classical Archaeology** 3c-01-3cr  
**Prerequisites:** Sophomore standing; HIST 195 (nonmajors)  
 An introduction to the archaeology of the Classical world. A variety of sites, artifacts, and monuments are examined with an emphasis on archaeological problems such as the recording and interpretation of archaeological evidence, the relation between historical and archaeological events, and the use and misuse of ancient texts. Attention is given to developments in theory and methodology and to the history of the discipline of Classical Archaeology from antiquity to the present day.
- HIST 401 Topics in United States History** 3c-01-3cr  
**Prerequisites:** HIST 200 and junior/senior HIST, HIST/PLAW, or SSED majors or by instructor permission  
 An upper-division course emphasizing lecture, reading, discussion, and writing on specialized topics relating to historical issues of the United States of America. The theme varies from semester to semester according to the expertise of the faculty member teaching the course.
- HIST 402 Topics in European History** 3c-01-3cr  
**Prerequisites:** HIST 200 and junior/senior HIST, HIST/PLAW, or SSED majors or by instructor permission  
 An upper-division course emphasizing lecture, reading, discussion, and writing on specialized topics relating to European historical issues. The theme varies from semester to semester according to the expertise of the faculty member teaching the course.
- HIST 403 Topics in Non-Western History** 3c-01-3cr  
**Prerequisites:** HIST 200 and junior/senior HIST, HIST/PLAW, or SSED majors or by instructor permission  
 An upper-division course emphasizing lecture, reading, discussion, and writing on specialized topics relating to non-Western historical issues. The theme varies from semester to semester according to the expertise of the faculty member teaching the course.
- HIST 404 Topics in Comparative History** 3c-01-3cr  
**Prerequisites:** HIST 200 and junior/senior HIST, HIST/PLAW, or SSED majors or by instructor permission  
 An upper-division course emphasizing lecture, reading, discussion, and writing on specialized topics relating to comparative historical issues. The theme varies from semester to semester according to the expertise of the faculty member teaching the course.
- HIST 480 Senior Seminar** 3c-01-3cr  
 A regimen of research resulting in a written paper. Work on a program selected by the instructor. For HIST majors or by instructor’s permission.
- HIST 481 Special Studies in History** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Each semester, courses are offered in interest areas that are not part of the regular program. Some examples of courses of this type are the Victorian Age, the History of Love, World War II, the Great Depression, the Adams Chronicles, and the History of New York City. Students may schedule as many of these courses as desired, but two per semester is the usual limit.
- HIST 482 Independent Study** var-3-6cr  
**Prerequisites:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office with 12cr in history; a 3.0 GPA in history classes; permission of a faculty member. Approval is based on academic appropriateness and availability of resources. Involves directed reading or research for qualified students. Experimental projects and personalized learning are encouraged.
- HIST 483 Honors Thesis** var-3-6cr  
**Prerequisites:** HIST, HIST/PLAW, or SSED/HIST Track major; 3.25 cumulative GPA; 3.5 GPA in HIST courses, departmental permission. Approval is based on academic appropriateness and availability of resources. A two-semester sequence of research and writing, culminating in an honors thesis. Honors theses are completed individually under the direction of a department professor who specializes in the student’s area of interest and are approved by a thesis committee comprising the director and two others, one of whom may come from outside the History Department. May be taken twice for a total of 6cr. Completion of 6cr of HIST 483 substitutes for HIST 480.
- HIST 487 Honors Colloquium in History** 3c-01-3cr  
 Colloquium emphasizing reading, discussion, and writing on an announced historical topic or theme which varies from semester to semester according to the expertise of the faculty member teaching the course. Open to all Honors College students who have completed HNRC 201 and, with instructor permission, to junior and senior HIST, HIST/PLAW, and SSED majors who have at least a 3.5 GPA in history classes.
- HIST 493 Internship** var-3-12cr  
 With departmental approval, students are attached to local or national government or private agencies doing directive, bibliographical, archival, or museum work. Advising professor meets with intern regularly and determines what papers or reports are required.

**HNRC: Honors College**  
**Robert E. Cook Honors College**  
**Academic Affairs Division**

- HNRC 101 Honors Core I** 5c-01-5cr  
**Prerequisites:** Freshman status, admission to the HNRC  
 This first in a series of three required and interrelated courses introduces Honors College students to major works of literature and art; to major ideas in history, philosophy, religious studies, literature, and the fine arts; and to critical thinking skills used in reading, writing, and discussion in an integrat-

ed, synthetic, and interactive pedagogical environment. While materials from various periods and disciplines are part of HNRC 101, each instructor has attempted to incorporate some works from a common century to provide students with a common ground for exploring the core questions.

**HNRC 102 Honors Core II** **5c-01-5cr**

**Prerequisites:** HNRC 101, freshman status, admission to the HNRC  
The second in a series of three required and interrelated courses. HNRC 102 continues the emphases of HNRC 101: a) introduction to major works of literature and fine arts; b) introduction to major ideas in history, philosophy, religious studies; and c) focus on critical thinking skills used in reading, writing, and discussion in an interrelated, synthetic, and interactive pedagogical environment. Although materials come from various periods and disciplines, each instructor has incorporated works from a common century to provide a common ground for exploring core questions. Building on their experiences in HNRC 101, students become more critical and analytical in their reading and response. Further, the ability to synthesize is emphasized based on their previous readings and learning experiences.

**HNRC 201 Honors Core III** **4c-01-4cr**

**Prerequisites:** Sophomore status, admission to the HNRC, and successful completion of HNRC 101 and 102 if admitted to the HNRC as a first-year student. Prerequisites for students admitted to the HNRC as sophomores are ENGL 101 and at least one Liberal Studies course in the humanities or fine arts.

Completes the introduction of Honors College students to major works of literature and art; major ideas in history, philosophy, religious studies, literature, and the fine arts; and critical thinking skills used in reading, writing, and discussion in an integrated and interactive pedagogical environment.

**HNRC 202 Honors Core: Sciences** **4c-01-4cr**

**Prerequisites:** HNRC 101, 102, sophomore status, admission to the HNRC

Concerned with science as a way of knowing about the world. Focuses on what scientists have learned about what it means to be human, how humans have been shaped by and, in turn, have influenced their environment, and on what use might be made of scientific knowledge. These themes are explored from disciplines in the natural and social sciences.

**HNRC 483 Honors Thesis** **var-1-6cr**

**Prerequisites:** HNRC student in good standing; at least junior status at time topic is proposed. Prior approval through advisor, faculty members, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research within the student's major discipline culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr. Approval is based on academic appropriateness and availability of resources.

**HNRC 499 Honors Senior Synthesis** **var-3-6cr**

**Prerequisites:** 3.25 GPA, HNRC good standing or instructor permission, 73 or more credits earned

Concluding cross-disciplinary Honors College experience, focused on the question "What are the obligations of the educated citizen?" Helps students understand and handle complex intellectual issues from multiple perspectives. A selection of topics is announced and described in the undergraduate course schedule. Substitutes for LBST 499.

**HPED: Health and Physical Education**  
**Department of Health and Physical Education**  
**College of Health and Human Services**

**HPED 117 Fitness-Swimming** **0c-21-1cr**

Fundamentals and techniques of swimming and fitness.

**HPED 124 Fitness Through Dance** **0c-21-1cr**

A physical fitness development course for men and women that employs a combination of exercises and dance techniques performed to music.

**HPED 126 Resistive Exercises** **0c-21-1cr**

Fundamentals and techniques of progressive resistive exercises.

**HPED 128 Golf** **0c-21-1cr**

Fundamentals and techniques of golf.

**HPED 142 Foundations of Health, Physical Education, and Sport** **3c-01-3cr**

Historical, philosophical, and psychosocial foundations of health and physical education are introduced. Specific emphasis is given to scientific theories and principles in such areas as health promotion and behavioral change, exercise physiology, motor development, kinesiology, and motor learning.

**HPED 143 Health and Wellness** **3c-01-3cr**

Introduces the major components of wellness: contemporary nutrition issues as they relate to personal food choices, physical fitness, stress management, sexually transmitted diseases, AIDS, and substance abuse. Successful completion of HPED 143 fulfills the Liberal Studies Health and Wellness requirement. FDNT/NURS 143 also fulfills this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**HPED 145 Tennis** **0c-21-1cr**

Fundamentals and techniques of tennis.

**HPED 162 Scuba Diving** **0c-21-1cr**

Teaches necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins, and snorkel (approximately \$15). Includes theory as well as practical work.

**HPED 165 Lifeguarding** **0c-21-1cr**

**Prerequisites:** Departmental consent and Advanced Swimmer  
Designed for professional lifeguards. Includes lifeguarding techniques for pools and fresh and saltwater beaches. Red Cross certification (Pittsburgh Division) granted upon satisfactory completion of course requirements.

**HPED 166 Basic Smallcraft** **0c-21-1cr**

**Prerequisite:** Intermediate swimming ability  
Introduces the use of the canoe, paddle board, and sailboat. Emphasizes the development of boating skills, safety rescue, and survival procedures. Red Cross smallcraft certification is granted upon successful completion.

**HPED 175 Prevention and Care of Injuries to the Physically Active** **2c-01-2cr**

**Prerequisite:** HPED, PESP, or ATHL majors  
Presents general information related to the prevention, recognition, and care of both acute and chronic injuries common to participants in physical activity/fitness and athletics. Topics include prevention techniques, the classification and staging of injury conditions, and basic evaluation techniques, as well as emergency management and follow-up care procedures.

**HPED 200 Fundamentals of Physical Activity** **1c-21-1cr**

A foundation course for training in the analysis and performance of the fundamental skills for subsequent motor behavior as they relate to games, sports, and dance. Provides the opportunity to refine powers of observation through principles of efficient and effective movement fundamentals. Individual data profile charts of performance are completed for future reference.

**HPED 209 Motor Behavior** **3c-01-3cr**

**Prerequisite:** Must be a major enrolled in HPED Department or instructor permission  
A study of the process of human motor behavior across the lifespan, specifically examining how development of mental and motor abilities affects human movement.

**HPED 210 Motor Development** **2c-01-2cr**

**Corequisite:** HPED 200  
A study of the processes of growth and development and their effects upon human motor behavior across the lifespan. Includes changes during physical growth, maturation, and aging and subsequent effects upon cognitive, perceptual, and physiological performance, both individually and within a sociocultural context.

- HPED 214 Teaching Health Fitness and Gymnastics** 1c-21-1cr  
**Prerequisite:** HPED 209  
 Provides the health and physical educator with an overview of the fundamentals and techniques of instructing personal fitness and gymnastics. Includes opportunities for skill development, analysis, and strategies for incorporating fitness and gymnastics into the physical education curriculum.
- HPED 215 Teaching Rhythmic Activities and Dance** 1c-21-1cr  
**Prerequisite:** HPED 209  
 An aesthetic and kinesthetic movement experience that prepares the student to be a teacher of basic movement in a variety of situations. Includes creative movement, rhythms, and square, folk, and contemporary dance.
- HPED 216 Teaching Elementary Physical Education** 2c-21-2cr  
**Prerequisites:** EDSP 102, HPED 142  
 An introduction to instructional methods in physical education with an emphasis on program standards, objectives, and assessments for kindergarten through fifth grade. Provides an overview of characteristics of elementary school children and appropriate activities for this age group. Includes opportunities to improve personal skills, develop units, and teach peers and school-age children.
- HPED 217 Teaching Middle School Physical Education** 2c-21-2cr  
**Prerequisites:** EDSP 102, HPED 142  
 An introduction to instructional methods in physical education with an emphasis on program standards, objectives, and assessments for sixth through eighth grades. Provides an overview of characteristics of middle school children and appropriate activities for this age group. Includes opportunities to improve personal skills, develop units, and teach peers and school-age children.
- HPED 218 Teaching Secondary Physical Education** 2c-21-2cr  
**Prerequisites:** EDSP 102, EDUC 242, HPED 142  
 An introduction to instructional methods in physical education with an emphasis on program standards, objectives, and assessments for ninth through twelfth grades. Provides an overview of characteristics of high school students and appropriate activities for this age group. Includes opportunities to improve personal skills, develop units, and teach peers and secondary school students.
- HPED 221 Human Structure and Function** 3c-01-3cr  
 Anatomical organization of the human body, surveyed in sufficient depth to prepare students for physiology, biomechanics, and adaptive physical education.
- HPED 242 Emergency Health Care** 1c-21-1cr  
**Prerequisites:** Admission to teacher education program, junior standing American Red Cross Standard, Advanced, and Instructor's certification and Multimedia Instructor's certification awarded upon successful completion.
- HPED 251 Foundations of Safety and Emergency Health Care** 3c-01-3cr  
 Focuses on accident prevention, injury control, and first responder's skills. Emphasizes identification of causes of accidents, recommended countermeasures, and mitigation. American Red Cross certifications are issued in 1) standard first aid, 2) community CPR, 3) instructor of standard first aid, and 4) instructor of community CPR.
- HPED 252 Introduction to the Driving Task** 2c-21-3cr  
 Provides an in-depth treatment of operating a motor vehicle competently in all major variations and under most conditions encountered in traffic. A competent operator is one who performs the total driving task knowledgeably and skillfully and demonstrates full understanding and application of identification, prediction, decision, and execution process.
- HPED 261 Water Safety Instructor** 1c-21-1cr  
**Prerequisites:** Basic swimming skills  
 Students learn to teach children and adults basic swimming and water safety skills. Emphasis placed upon proper body mechanics and teaching progressions. Students have opportunity to earn American Red Cross Water Safety Instructor certification upon successful completion of requirements.
- HPED 263 Aquatics** 0c-21-1cr  
 Basic performance techniques in swimming strokes presented with special emphasis on teaching methodology, aquatic sports and games, water safety, skin diving, springboard diving, and other aquatic activities.
- HPED 264 Advanced Aquatics** 0c-21-1cr  
 Swimming and rescue skills necessary to complete American Red Cross Senior Lifesaving Course. Emphasizes a broad range of other aquatic experiences and teaching strategies.
- HPED 270 Instructor of Handicapped Swimming** 0c-21-1cr  
**Prerequisite:** HPED 261  
 Concerned with the learning of skills used to teach swimming to exceptional children. All handicaps are considered. Important not only in physical education but also for the mentally retarded, rehabilitation education, agency personnel, postgraduate swimming education, YMCA Boys Clubs, community programs, private clubs, and industrial programs. The Red Cross certification Instructor of Swimming for the Handicapped is granted upon successful completion. Taught in the Summer only.
- HPED 271 Instructor of Scuba Diving** 0c-21-1cr  
**Prerequisite:** HPED 262  
 Prepares instructors to teach skin and scuba diving. Emphasizes teaching methods, use and mechanics of equipment, safety, diving physics and physiology, and advanced diving skills. Instructor of Scuba Diving certificate granted by the Professional Association of Diving Instructors upon successful completion. Taught in the Summer only.
- HPED 272 Instructor of Canoeing** 0c-21-1cr  
**Prerequisite:** HPED 266  
 Concerned with the learning of skills pertinent to teaching canoeing to beginners. All aspects of canoeing including paddling, repair of equipment, white water canoeing, safety, survival, and teaching techniques are presented. The Red Cross certification Canoeing Instructor is granted upon successful completion. Taught in the Summer only.
- HPED 273 Instructor of Sailing** 0c-21-1cr  
**Prerequisite:** HPED 266  
 Concerned with learning of skills pertinent to teaching beginning sailing. All aspects of sailing are considered, including the elements of sailing, repair of equipment, racing, safety, and techniques of teaching. Taught in the Summer only.
- HPED 274 Instructor of Infants and Preschoolers in Swimming** 0c-21-1cr  
**Prerequisites:** HPED 261, instructor permission  
 Methods course for preparation of swimming instructors in the knowledge and skills of teaching young children to swim. YMCA certification Instructor of the Very Young granted upon successful completion of requirements. Taught in the Summer only.
- HPED 276 Coaching of Swimming** 0c-21-1cr  
**Prerequisite:** HPED 261  
 A lecture-discussion methods course to prepare Health and Physical Education majors for coaching of swimming. Emphasizes training methods, officiating, nutrition, scientific principles, and meet strategy. Taught in the Summer only.
- HPED 279 Swimming Pool Maintenance and Chemistry** 2c-01-2cr  
 A lecture-discussion course to teach fundamental water chemistry, filtration, treatment of water problems, winterization of outdoor pools, and pool management. Emphasizes water testing and analysis of chemicals and bacteria. Taught in the Summer only.
- HPED 280 Aquatic Facilities Management** 2c-01-2cr  
 An organizational and administrative course to prepare the aquatic professional for management of indoor and outdoor facilities. Includes facility design, safety procedures activity, and sport and recreational aspects.
- HPED 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any

special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**HPED 285 Group/Individual Exercise Leadership 1c-2l-3cr**

**Prerequisite:** PESP/EXSC Majors

Provides theoretical knowledge of leadership skills necessary to design, implement, and evaluate safe and effective exercise programs in group and individual settings. An emphasis is placed on group exercise leadership and fitness instruction. Students are also introduced to the management and administration of such programs. Observations within the field are required, as well as opportunities to apply introductory concepts of exercise training through practical application.

**HPED 286 Strength/Personal Training Practicum 1c-1l-2cr**

**Prerequisite:** PESP/EXSC majors

Provides theoretical knowledge of leadership skills necessary to design, implement, and evaluate safe and effective personal training programs. An emphasis is placed on individualized fitness instruction and the development of training programs for cardiovascular fitness and strength. Observations within the field are available as well as opportunities to apply introductory concepts of exercise training through practical application.

**HPED 292 Introduction to Sport Management 3c-0l-3cr**

Introduces theories and practices in the field of sport management. Emphasizes management principles, leadership competencies, ethical principles, and governance in the sport industry. An introduction of sport marketing, sport finance, and sport law is provided.

**HPED 315 Biomechanics 3c-0l-3cr**

**Prerequisite:** HPED 221

A study of the relationship between mechanical and physical principles and human movement.

**HPED 316 Teaching Elementary Health Education 2c-0l-2cr**

**Prerequisites:** EDSP 102, HPED 142

Introduces the theories of instruction and methods for teaching health education to elementary school students. Identifies developmentally appropriate teaching methods and activities, reviews and assesses current health curriculum, and demonstrates the use of technology in the health classroom. Provides opportunities for observation, lesson planning, and teaching in both rural and inner-city health education classrooms.

**HPED 318 Preprofessional Experience I 3c-0l-1cr**

**Prerequisite:** EDUC 242, HPED 216, HPED majors only

Students teach as assistants to a faculty member in two different activities, one in physical education (general education) and one in elementary physical education. Emphasizes unit development, class management, leadership skills, and evaluation.

**HPED 319 Preprofessional Experience II 3c-0l-3cr**

**Prerequisites:** Junior status (60cr or more), HPED 343 and 411 with a grade of C or better in each

Students may request an assisting/teaching/leadership assignment in certain university-related areas that may be either instructional or noninstructional in nature. Examples of such professional areas are adaptive, recreation, dance, coaching, aquatics, intramurals, administration, elementary, service or major classes, club activities, and assisting in laboratory or the training room.

**HPED 320 Managing Facilities and Events in Sport 3c-0l-3cr**

Investigates the management functions necessary to operate a variety of sport facilities. Emphasizes liability risk reduction, staffing, design and renovation, maintenance, and amenities pertinent to sport facilities. Strategies for managing a sporting event are presented and practiced.

**HPED 325 School and Community Health 3c-0l-3cr**

**Prerequisite:** HPED 142

Introduces the role of school and community in protecting and promoting the health of its members. Includes historical development of the concepts of health and health education, identification of national and community goals to reduce risk of disease and enhance health status, and the responsibilities of both school and community toward achieving these goals.

**HPED 330 Assessment in Physical Education 0c-2l-1cr**

**Prerequisite:** HPED major

Provides preservice physical education teachers with an understanding of assessment strategies and techniques commonly used in physical education. Provides the opportunity to administer different motor skill and physical fitness assessments and to utilize computer applications associated with these assessments.

**HPED 333 Psychology of Coaching 2c-0l-2cr**

The goals of athletics in schools and communities; principles and responsibilities of the coach; current problems.

**HPED 335 Athletic Coaching 3c-0l-3cr**

A lecture course to prepare students for coaching or administering an athletic program. Emphasizes the professional preparation and responsibilities of a coach, the support and auxiliary personnel working under the coach, the coach's responsibility to the athletes, plus the administrative responsibilities of coaching.

**HPED 341 Evaluation in Health and Physical Education 3c-0l-3cr**

**Prerequisite:** Junior standing

Evaluation theory, instructional objectives, and cognitive test construction; technical and practical considerations in testing and interpretation of test results in both health and physical education.

**HPED 343 Physiology of Exercise 3c-0l-3cr**

**Prerequisite:** HPED 221 with a grade of C or better

Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

**HPED 344 Adapted Physical Activity and Sport 3c-0l-3cr**

**Prerequisite:** HPED 209, 221

Recognition of structural deviations, corrective exercises, physical activity, and sport for individuals with a wide range of disabilities.

**HPED 345 Athletic Training 3c-0l-3cr**

**Prerequisite:** HPED 221 or equivalent applied anatomy course

A survey of common athletic injuries with emphasis on etiology, pathophysiology, and classification. General injury assessment and management procedures are also presented.

**HPED 346 Athletic Training Lab 0c-2l-1cr**

**Corequisite:** HPED 345

Develops basic athletic training skills for the beginning and intermediate athletic training student. Emphasizes athletic taping and wrapping, contemporary immobilization and ambulation devices, protective sports equipment, and transportation and transfer of the injured athlete.

**HPED 347 Physiology of Exercise Laboratory 0c-2l-1cr**

**Corequisite:** HPED 343

Laboratory experiences to illustrate physiological responses to exercise. Skills associated with the use of current laboratory equipment and techniques are developed. Supplements lecture-based content from HPED 343.

**HPED 349 Applied Pediatric Exercise Lab 0c-2l-1cr**

**Prerequisite:** HPED 343

Provides physical education students with an understanding of pediatric exercise concepts, particularly exercise programming, physical fitness, and assessment, related specifically to physical education. Provides the opportunity to practice administering field-based assessments of physical fitness and designing safe activities and/or exercise programs to enhance health, fitness, or performance in youth.

**HPED 350 Health Aspects of Aging 3c-0l-3cr**

**Prerequisites:** PSYC 101, SOC 151, and junior standing

Current theory and research related to gerontology are introduced to increase understanding of the physical and psychosocial dimensions of aging. Additionally, emphasizes lifestyle factors and disease prevention aspects of aging. Recommended for students who plan to work with older adults.

- HPED 353 Driver Education Program Management** 3c-01-3cr  
Emphasizes the development, organization, and management of high school driver education from the standpoint of its historical development to its present programs designed to meet the demands of the highway transportation system. Special emphasis on the role of the teacher in conducting a high-quality program that meets with student, parent, school, and community approval.
- HPED 354 Application of Driver Education Instructional Modes** 2c-21-3cr  
**Prerequisites:** HPED 251, 252, 353  
Prepares prospective driver education teachers to plan, teach, and evaluate the four modes of driver education (classroom, on-road, simulation, and multiple-vehicle range). Teaching high school students in supervised laboratory sessions is provided.
- HPED 365 Advanced Athletic Training** 3c-21-4cr  
**Prerequisites:** HPED 345, 346  
Teaches assessment procedures, evaluation methods, and proper athletic training protocol for neuromuscular and skeletal muscle injuries. In addition, administrative issues in athletic training are addressed, emphasizing accurate medical documentation. Emphasizes subjective and objective assessment and documentation of findings.
- HPED 370 Adapted Health and Physical Education** 3c-01-3cr  
**Prerequisites:** EDSP 102, HPED 209; at least one of the following: HPED 214, 215, 216, 217, 218, or 316  
Introduces the educational issues and methods used to effectively instruct students with disabilities and other issues that become barriers to learning. Includes a study of current laws and guidelines regarding the legal rights of students with disabilities and their parents. Identifies low and high incidence of disabilities, recognitions of structural deviation, and corrective exercises. Introduces instructional adaptations to facilitate learning in the health classroom and gymnasium.
- HPED 372 Health and Physical Education for Special Populations** 2c-01-2cr  
**Prerequisites:** EDEX 112, junior level or above  
Methods and techniques of teaching health and physical education to special populations are explored. Primarily for students majoring in special education. Focuses on handicapping conditions, limitations imposed by such conditions, and the responsibility of the special education teacher working in the physical education setting.
- HPED 375 Physiological Basis of Strength Training** 3c-01-3cr  
**Prerequisite:** HPED 221 with a grade of C or better  
Gives the student the anatomical and physiological basis of muscle function. Students should also gain an understanding of changes that can be made through weight training and knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment will be available.
- HPED 376 Athletic Training Clinical Practicum I** 0c-21-1cr  
**Prerequisites:** HPED 251, 345, 346  
The opportunity to develop and demonstrate proficient psychomotor skills within the domains of athletic injury prevention and acute care, in coordination with a one-semester clinical field experience. This clinical field experience allows an opportunity to practice and apply skills taught under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, those relating to safety/risk management, conditioning, equipment fitting, taping and wrapping, acute care, and transportation/transfer of the injured athlete. Restricted to students seeking certification by the National Athletic Trainers Association.
- HPED 377 Athletic Training Clinical Practicum II** 0c-21-1cr  
**Prerequisite:** HPED 365  
The opportunity to develop and demonstrate proficient psychomotor skills within the domain of athletic injury assessment, in coordination with a one-semester clinical field experience. This clinical field experience allows an opportunity to practice and apply skills taught under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, those relating to anatomical landmarks' identification, orthopedic and neurological evaluation, and general medical examination. Restricted to students seeking certification by the National Athletic Trainers Association.
- HPED 380 Seminar in Sports Medicine** 2c-01-2cr  
**Prerequisite:** HPED 345 or instructor permission  
Presents comprehensive instruction in such areas as health care administration, pharmacology, radiology, technological advances in sports medicine, and other contemporary issues.
- HPED 385 General Medical Conditions in Athletic Training** 2c-01-2cr  
**Prerequisites:** HPED 345 and 365 or instructor permission  
An overview of general health assessment and physical examination techniques related to the physically active. A systemic approach is used to address issues related to the anatomy, pathology, physiology, and diagnostic testing of both general conditions and diseases of the human body in physically active individuals and individuals with disabilities.
- HPED 408 Guided Research Problem** var-2cr  
**Prerequisite:** Permission of department chairperson  
Selection and research of a problem pertinent to student interests and those of the professions of health, physical education, and recreation. Classes held on a seminar basis.
- HPED 410 Exercise Prescription** 3c-01-3cr  
**Prerequisite:** HPED 343 with a grade of C or better  
Teaches individuals to write exercise prescriptions based upon a subject's tolerance for physical activity. Special emphasis is on risk factors, techniques of evaluation, drugs, injuries, environmental factors, and motivation and their role in physical activity assessment.
- HPED 411 Physical Fitness Appraisal** 3c-01-3cr  
**Prerequisite:** HPED 343 with a grade of C or better  
Involves the selection, administration, and interpretation of various tests for appraising the physical fitness levels of individuals. Information given concerning the various fitness components and discussions held so that each student gains an understanding of the variables to be tested.
- HPED 412 Physical Activity and Stress Management** 3c-01-3cr  
Acquisition of necessary understanding of anxiety and stress, their nature, place in society, and intervention strategies as they relate to physical activity.
- HPED 413 Physical Activity and Aging** 3c-01-3cr  
**Prerequisite:** HPED 343 with a grade of C or better  
Presents major aspects of physical activity, its importance to the older adult, and the organization of an activity program. Attention to physiology of physical activity, effects of activity on growth and aging, exercise prescription, flexibility, overweight and obesity, and motivational strategies.
- HPED 414 Exercise Electrocardiography** 1c-11-2cr  
**Corequisite or Prerequisites:** PESP/EXSC majors, HPED 343  
An introduction to the basic concepts of electrocardiography (ECG), including an understanding of electrophysiology, electrode lead placement, both rhythm strips and 12-lead interpretation. Utilizing electrocardiograms, students will also be able to recognize normal and abnormal rhythms, including those ECG abnormalities brought about by exercise. Normal and Abnormal responses during Graded Exercise Testing will also be interpreted.
- HPED 426 Health Science Instruction** 3c-01-3cr  
**Prerequisite:** HPED 316 and admission to Teacher Education Program  
An overview of health curriculum with a focus on middle school and high school health education teaching methods and media of instruction. Includes unit development, opportunities for classroom instruction, and guidelines for maintaining professional growth. Explores current research in classroom techniques, motivational strategies, and assessment of student learning within a diverse population.
- HPED 430 The American Woman and Sport** 3c-01-3cr  
Comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the sport involvement of girls and women in our

culture. Presents historical perspective with an emphasis on physiological, psychological, and sociocultural influences.

**HPED 441 Psychosocial Implications for Health and Physical Education** 3c-01-3cr

**Prerequisite:** Senior standing

A study of psychological and sociological influences, both theoretical and empirical, and their effects upon health and physical performance.

**HPED 442 Senior Seminar: Professional Development in Health, Physical Education, and Sport** 3c-01-3cr

**Prerequisite:** 90cr completed

For majors of Health, Physical Education, and Sport. Related to professional development issues and transition from college graduate to entry-level professional. Includes development of an electronic portfolio, assessment of postgraduation educational opportunities, and exploration of information literacy.

**HPED 445 Business Practices in Sport** 3c-01-3cr

**Prerequisite:** HPED 292, 320

Focuses on the application of business practices to operate a successful sports organization. Topics emphasized are promotion in sport, sport marketing, financing a sports organization, sport sponsorships, sales practices, public relations strategies, and media interaction. The unique application to the sport industry is emphasized.

**HPED 446 Therapeutic Modalities** 3c-21-4cr

**Prerequisite:** HPED 365

A basic introduction to the use of therapeutic modalities and the role they play in the rehabilitation of athletic injuries. Physical agents used in the care of athletic injuries are presented, highlighting the physiological effects of each modality, as well as indications and contraindications for their use.

**HPED 447 Cardiopulmonary Resuscitation (CPR) Instructor** 1c-11-1cr

**Prerequisite:** Basic CPR certification

A study of methods and skills necessary to certify instructors of cardiopulmonary resuscitation and multimedia first aid. Successful completion of requirements leads to certification by the American Health Association and the American Red Cross. Taught in the Summer only.

**HPED 448 Therapeutic Exercises for Athletic Injury Management** 3c-21-4cr

**Prerequisite:** HPED 365

The theoretical framework for athletic injury assessment and management of the injured athlete is discussed. A problem-solving approach to the selection and implementation of specific tests and therapeutic interventions is utilized. An overview of therapeutic management as well as the development of skill in basic therapeutic exercise procedures for improving muscle performance, relaxation, and mobilization are included.

**HPED 450 Curriculum and Programming in Sexuality Education** 3c-01-3cr

Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

**HPED 460 Law and Issues in Managing Sport** 2c-01-2cr

**Prerequisite:** HPED 292

Emphasizes the interaction between the legal system and the sport industry. Topics include liability risk management, contracts, torts, sports agents, dispute resolution, and product liability. A focus on the influence of Title IX, antitrust exemption, religion, drug testing, and ergogenic aids on sport operations.

**HPED 476 Athletic Training Clinical Practicum III** 0c-21-1cr

**Prerequisite:** HPED 365

An opportunity to develop and demonstrate proficient psychomotor skills within the domains of athletic training organization/administration and education/guidance, in coordination with a one-semester clinical field experience. This clinical field experience allows an opportunity to practice and apply skills under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized

include, but are not limited to, those relating to communication, record-keeping, planning, budgeting and purchasing, facility design, policies/procedures, and other athletic health care managerial/administrative duties. Athletic training instruction and guidance skills are also addressed. Restricted to students seeking certification by the National Athletic Trainers Association.

**HPED 477 Athletic Training Clinical Practicum IV** 0c-21-1cr

**Prerequisites:** HPED 446, 448

The opportunity to develop and demonstrate proficient psychomotor skills within the domain of athletic injury rehabilitation, in coordination with a one-semester clinical field experience. This clinical field experience allows an opportunity to practice and apply skills under the direction of a clinical instructor within the IUP Athletic Department or an affiliated clinical site. Specific skills emphasized include, but are not limited to, exercise, manual therapy, and other advanced musculoskeletal screening and therapeutic intervention techniques. Restricted to students seeking certification by the National Athletic Trainers Association.

**HPED 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**HPED 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**HPED 485 Student Assistance Program Training** 3c-01-3cr

**Prerequisites:** Junior standing and EDSP 102

Introduces the concept of Student Assistance Programs (SAP) in schools. Includes the history of SAP, current involvement in public education, and the educator's role as an SAP member. Provides an experiential basis for preparation to assume the role of an SAP member. Note: Majors in the B.S.Ed.–Health and Physical Education program have first opportunity to enroll in class; any openings in the class will then be offered to Elementary and Secondary Education majors.

**HPED 492 Health Fitness Instruction** 3c-01-3cr

**Prerequisite:** HPED 411 with a grade of C or better

Students acquire the knowledge, skills, and abilities required to develop programs of physical activity and fitness for healthy adults and those with controlled disease. Experience in leading an exercise class and knowledge of functional anatomy and exercise physiology are also expected prior to participation in the class.

**HPED 493 Internship** var-3-12cr

**Prerequisites:** HPED 410 and 411 with a grade of C or better in each

An educational opportunity which integrates classroom experience with practical experience in community service agencies or industrial, business, or governmental organizations. Junior standing required.

**HRIM: Hospitality Management**  
**Department of Hospitality Management**  
**College of Health and Human Services**

**HRIM 101 Introduction to the Hospitality Industry** 3c-01-3cr

A study of the development and current status of the hospitality industry. Major hotel, restaurant, and related area employers are profiled. Career opportunities are discussed. Guest speakers from various hospitality industry segments are featured.

**HRIM 115 Introduction to Tourism** 3c-01-3cr

Introduces concepts pertaining to international and domestic tourism. Examines the economic, social, and cultural aspects of tourism as well as how destinations are marketed.

<p><b>HRIM 130 Hospitality Sanitation and Security</b> 3c-01-3cr Introduces concepts and issues pertaining to sanitation and security management in the hospitality industry. Examines causes and prevention of food-borne illness, Hazard Analysis Critical Control Point food production methods, and current government regulations. Special emphasis is on crisis management protocols dealing with critical incidents involving guests and employees. Prepares students for taking the National Restaurant Association ServSafe sanitation certification examination.</p>	<p>Provides the student of hospitality management the opportunity to evaluate operational characteristics of commercial restaurants from the perspective of a dining patron. Students, as members of dining teams, dine in a variety of restaurant concepts and evaluate the business operation on a battery of performance criteria, including site appearance, menu diversity, service competence, product quality, and sanitation. Evaluations and recommendations for change are presented to the class for discussion. Students incur out-of-pocket dining expenses.</p>
<p><b>HRIM 150 Principles of Hospitality Management</b> 3c-01-3cr Introduces classic management theory and responsibilities, with an emphasis on hospitality industry applications.</p>	<p><b>HRIM 310 Professional Development in the Hospitality Industry</b> 2c-01-2cr <b>Prerequisite:</b> HRIM 256 Provides an opportunity to identify and design industry-specific job search strategies, techniques, and skills including resume and cover letter writing, interviewing, portfolio development, and strategies to attain career success within the hospitality industry.</p>
<p><b>HRIM 212 Club Operations Management</b> 3c-01-3cr Provides an in-depth understanding of the unique aspects of private club management. The differences as compared to public golf courses, public restaurants, hotel operations, equity (member-owned), and non-equity (corporate-owned) club settings are explored.</p>	<p><b>HRIM 313 Food Production and Service</b> 1c-61-4cr <b>Prerequisites:</b> HRIM 130, 150, and instructor permission Introduces the management of food service operations in commercial kitchen facilities. Includes planning, preparation, and service of quantity food production. Emphasizes the integration of sanitation, menu planning, cost controls, and application of computer software.</p>
<p><b>HRIM 245 Diversity and Multicultural Management in the Hospitality Industry</b> 3c-01-3cr <b>Prerequisite:</b> Sophomore standing Explores what happens when diverse people work together in the hospitality industry. Also examines the effects of international migration and the changing roles of women and other minorities which lead to multicultural urban centers within the United States and other hospitality venues. Also focuses on the cultural factors affecting productivity in the culturally diverse hospitality environment.</p>	<p><b>HRIM 320 Hospitality Marketing</b> 3c-01-3cr <b>Prerequisite:</b> HRIM 256 Students gain an understanding of the principles and concepts of marketing as they apply to hospitality management. Analyzes consumer behavior related to the hospitality industry. Students learn to make effective marketing decisions as they apply to customer satisfaction.</p>
<p><b>HRIM 256 Human Resources in the Hospitality Industry</b> 3c-01-3cr <b>Prerequisite:</b> HRIM 150 or FDNT major Examines human resources management in the hospitality industry. Topics include cultural diversity, legal requirements, job analysis, recruitment and selection, training and development, performance appraisal, compensation, and benefits administration.</p>	<p><b>HRIM 330 Applications of Food Production and Service</b> 1c-61-4cr <b>Prerequisite:</b> HRIM 313 or FDNT 150/151 Provides training for the hospitality management student in advanced fundamentals of technique, timing, and management skills through laboratory experiences, as well as the operation of the Allenwood Restaurant facility.</p>
<p><b>HRIM 259 Hospitality Purchasing</b> 3c-01-3cr <b>Prerequisite:</b> FDNT 150 or equivalent Includes sources, standards, grades, methods of purchase, and storage of various foods, beverages, and fixtures. Emphasizes the development of purchasing policies and specifications.</p>	<p><b>HRIM 335 Legal Issues in Hospitality</b> 3c-01-3cr <b>Prerequisite:</b> HRIM 256 Examines the concepts and issues pertaining to hotel and restaurant law, government regulations, and their impact on the hospitality industry. A special emphasis is on innkeeper-guest relationship, employee relations, food laws and liability, liquor law and liability, and guest rights.</p>
<p><b>HRIM 260 Hotel Rooms Division Management</b> 3c-01-3cr <b>Prerequisites:</b> HRIM 101, 150 Examines work areas, functions, and relationships pertaining to the rooms division components of a hotel or resort. Areas of concentration include front office, housekeeping, maintenance, uniformed service, security, sales, recreation, and other relevant operations components. Elements of guest-room layout and design are also discussed.</p>	<p><b>HRIM 343 Fund-Raising for Special Events</b> 3c-01-3cr Relevant management tools, techniques, and strategies used for acquiring event revenue through fund-raising and special event management are explored. Evolving legislation affecting sponsor and donor relationships is examined. The contemporary concept of sponsorship is benchmarked against a historical review to frame an understanding of how sponsor and organizational needs change.</p>
<p><b>HRIM 265 Hospitality Cost Management</b> 3c-01-3cr <b>Prerequisite:</b> ACCT 201 Identifies and analyzes the control of hospitality operation costs. including those in the areas of food, beverage, labor, and material, and compares those costs to industry norms. Students analyze income statements and balance sheets.</p>	<p><b>HRIM 346 Catering for Special Events</b> 3c-01-3cr <b>Prerequisite:</b> HRIM 313, equivalent, or by permission A practical understanding of the management tasks of a caterer and their relationship to the special event industry. (Offered as HRIM 406 prior to 2009-2010)</p>
<p><b>HRIM 281 Special Topics</b> var-1-3cr <b>Prerequisite:</b> As appropriate to course content Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.</p>	<p><b>HRIM 350 Introduction to the Casino Industry</b> 3c-01-3cr <b>Prerequisite:</b> Sophomore standing or instructor permission Introduces the multibillion-dollar casino industry. Examines the gaming industry from a historical perspective and includes legal, social, and economic issues. Also reviews the various games played in casinos and the current trends, as well as the most popular casino destinations in the world. Special attention is devoted to the growth of casinos on cruise ships, on Native American reservations, and on riverboats in the United States. Includes a field trip to Atlantic City or another casino setting, which occurs on a weekend. This field trip serves as a catalyst to appreciate all of the theoretical concepts discussed in the lectures.</p>
<p><b>HRIM 299 Cooperative Education (First Experience)</b> 0cr <b>Prerequisites:</b> Completion of 30cr, 2.0 GPA A semester-long program that combines classroom theory with practical application through job-related experiences. Student required to complete two alternating experiences; only one may be a summer experience.</p>	<p><b>HRIM 358 Food Service Equipment and Facilities Design</b> 3c-01-3cr <b>Prerequisite:</b> HRIM 313</p>
<p><b>HRIM 300 Critiquing Commercial Restaurants</b> 1c-01-1cr <b>Prerequisites:</b> HRIM 130, 256, junior status</p>	

Examines types and uses of food service production and service equipment with emphasis on incorporation into an effective facilities design. Field trips permit investigation of a variety of unit designs.

**HRIM 365 Hotel Facilities Management** 3c-01-3cr  
**Prerequisite:** HRIM 101

Analyzes principles of hotel design, construction, and physical plant management. Discusses housekeeping and maintenance department operations.

**HRIM 400 Restaurant Revenue Management** 3c-01-3cr  
**Prerequisite:** HRIM 265

Promotes an understanding of the management of revenue in restaurant operations through the application of analytical tools to formulate and implement strategies in response to daily operational complexities and constraints to achieve budgetary objectives.

**HRIM 402 Beverage Management** 3c-01-3cr

**Prerequisite:** Verifiable proof of 21 years of age or permission  
Examines the principles, processes, and theories of beverage service. Analysis of methods of alcoholic beverage production and examination of categories of spirits, malt beverages, and wine, as well as legal concerns of service. Development and marketing of beverage operations are discussed. Includes voluntary tasting and evaluation of alcoholic beverage products.

**HRIM 403 Wine and Wine Service** 3c-01-3cr

**Prerequisite:** All students must be 21 years of age or older

A study of the wine-growing regions, production, processing, and distribution of domestic and international wines. Topics include types of wine grapes, varieties of wine, proper storage procedures, the techniques of proper wine service, and responsible alcohol service.

**HRIM 404 Brew Pub and Brewery Operations** 3c-01-3cr

**Prerequisite:** Verifiable proof of 21 years of age or older  
Addresses the art of brewing beer, beer styles, brewing equipment requirements, responsible alcohol service, beer and food pairing, sales, and marketing. Students will visit local breweries and brew pubs. Students are required to attend three day-long field trips.

**HRIM 408 Institutions Management** 3c-01-3cr

**Prerequisites:** ACCT 201, HRIM 313, 326, senior standing  
A compendium of the concepts of managing human resources, capital, materials, equipment, and markets as related to various hospitality property systems. Focus on concept development and managerial decision making.

**HRIM 411 Seminar in Hospitality Management** 3c-01-3cr

**Prerequisites:** HRIM 360, 365  
An analysis of the current trends and practices within hospitality industry as related by industry professionals. Includes researching topics and writing at least three research papers. (Writing-intensive course)

**HRIM 413 Advanced Food Production and Service** 1c-6I-4cr

**Prerequisites:** HRIM 330 and permission  
A food and beverage systems course emphasizing restaurant front- and back-of-the-house operations management. Students research, plan, prepare, and present theme-oriented dinners showcasing selected domestic and international cuisine. Students function as both operations employees and managers within the department's food and beverage operation.

**HRIM 420 Hotel Sales** 3c-01-3cr

**Prerequisites:** HRIM 101 and 260  
A practical approach to understanding the functions and activities of the sales department within a hotel property. A thorough review of the organizational structure of a typical hotel sales department and documentation used by the department will be made. Identification of and approaches to securing typical hotel market segments are covered.

**HRIM 433 Educational Study Tour** var-2-6cr

A comprehensive program of directed activities permits firsthand experiences in the historical and cultural aspects of the hospitality industry worldwide. Visits to renowned operations are included in the tour.

**HRIM 470 Hospitality Business Model** 3c-01-3cr

**Prerequisites:** Senior status and instructor permission

Provides the opportunity to integrate and apply hospitality operations management concepts into the development of a working hospitality business model.

**HRIM 481 Special Topics** var-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**HRIM 482 Independent Study in Hospitality Management** var-1-6cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Must apply a semester in advance and have 60cr earned.

**HRIM 493 Internship** var-3-12cr

**Prerequisites:** 60cr earned, 2.0 GPA, and completion of an approved 400-hour pre-Internship experience  
An opportunity to work in a supervised experience directly related to the Hospitality Management major. Must meet university and departmental internship requirements. Minimum of 400 hours required.

**Note:** White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

**IFMG: Information Management**  
**Department of Management Information Systems**  
**and Decision Sciences**  
**Eberly College of Business and Information Technology**

**Note:** Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**IFMG 101 Computer Literacy** 3c-01-3cr

An introductory course providing a fundamental understanding of computers. Familiarizes students with the interaction of computer hardware and software. Emphasizes the application of microcomputers, the use of productivity software (word processing, spreadsheet management, file and database management, presentation graphics, web browsers, search strategies, and e-mail), and the social and ethical aspects of the impact of computers on society. (Does not count toward COSC major.) **Note:** cross-listed as BTED/COSC 101. Any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**IFMG 201 Internet and Multimedia** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail  
Focuses on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. An information literacy course for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**IFMG 205 Foundations of MIS** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101  
An introductory course providing a fundamental understanding of MIS. Systems theory, quality, decision making, and the organizational role of information systems are introduced. Information technology, including



basic programming skills, is stressed. Introduces concepts of organization, information system growth, telecommunications, and re-engineering.

**IFMG 210 Introduction to Front-End Business Applications** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101

An introduction to systems and development concepts, information technology, and front-end business application software. Explains how information is used in organizations and how MIS enables improvement in quality, timeliness, and competitive advantage. As part of this course, students learn how to design and construct a front-end business application using a programming language.

**IFMG 230 Introduction to Back-End Business Applications** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101

Introduces the back-end business programming language as it applies to business organizations and their applications. Structured back-end business concepts and methods are taught as the student learns how to solve business problems using computers. Involves using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

**IFMG 250 Business Systems Technology** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101 or COSC 110

Presents a functional review of computing equipment and the organization of components and devices into architectural configurations. Also teaches the principles of system software and builds an understanding of combinations of hardware and software within architectural designs.

**IFMG 251 Business Systems Analysis and Design** 3c-01-3cr

**Prerequisite:** IFMG 210

Involves teaching the tools and techniques required for analysis and design of business systems. The major steps in the system's development life cycle are presented along with practical applications from the major subsystems of typical business organizations. Issues related to personnel, hardware, software, and procedures are explored as students work individually and in project teams to solve typical business application problems. MIS majors may count this course towards their graduation requirements.

**IFMG 255 Business Applications in COBOL** 3c-01-3cr

**Prerequisite:** IFMG 205

Introduces the COBOL programming language as it applies to business organizations and their applications. Structured COBOL concepts and methods are taught as the student learns how to solve business problems using computers. Involves using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

**IFMG 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**IFMG 300 Management Information Systems: Theory and Practice** 3c-01-3cr

**Prerequisite:** COSC/BTED/IFMG 101

Includes basic MIS concepts, fundamentals, and practices. Broad areas of coverage are principles, the computer as a problem-solving tool, computer-based information systems (CBIS), organizational information systems, and Information Systems management.

**IFMG 305 Micro Database Systems** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101

The fundamentals of database management, including different database models and database design issues, are examined. Emphasizes the use of various tools of relational database software, including report generators, screen builders, and query facilities. Design techniques and software tools are used in creating a database application. Intended as an elective for business students who are not majoring in MIS. MIS majors may not count this course towards their graduation requirements. (Offered as IFMG 261 prior to 2011-12)

**IFMG 330 Advanced Back-End Business Applications** 3c-01-3cr

**Prerequisite:** IFMG 230 or COSC 220

Explores back-end business programming language as it applies to business organizations and their applications. Shows ways to embed and link a variety of techniques of back-end business concepts and methods to solve business problems using computers and web technologies. The student implements back-end business and user interface techniques in managing business activities.

**IFMG 352 LAN Design and Installation** 3c-01-3cr

**Prerequisite:** BTST 273 or IFMG 250 or any COSC course numbered 300 or higher

A study of fundamental local area networking concepts. A detailed study of the basics of local area network (LAN) technology. A comparative study of commercially available LAN systems and products. Features a hands-on laboratory implementation of a LAN. Cross-listed as COSC 352. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

**IFMG 354 Testing and Controlling LANs** 3c-01-3cr

**Prerequisite:** COSC 352 or IFMG 352 or equivalent

Explores local area network (LAN) topologies and their associated protocols. Introduces ways of interconnecting, securing, and maintaining LANs. Provides hands-on experience in the interconnection of multiple LANs. Also presents a hands-on approach to design, testing, and administration of interconnected LANs. Cross-listed as COSC 354. Either course may be substituted for the other for D/F repeats but may not be taken for duplicate credit.

**IFMG 368 E-Commerce Security** 3c-01-3cr

**Prerequisite:** IFMG 352

Introduces the security concepts, operating systems security, network security, database, web server, and communication security. Public and common practices of procedures and regulations regarding e-commerce security are explored. Writing information security policies are introduced.

**IFMG 370 Advanced COBOL** 3c-01-3cr

**Prerequisite:** COSC 220

**Corequisite:** IFMG 250

A continuation of introductory COBOL with an emphasis on structured methodology of program design, development, testing, implementation, and documentation of common business-oriented applications. Includes a heavy emphasis on the techniques and concepts of the table processing, file organization, and processing alternatives, internal and external sorting, subroutines, and application development for both the batch and online systems. Micro Focus COBOL software is utilized.

**IFMG 382 IT Audit and Control** 3c-01-3cr

**Prerequisites:** ACCT 201, COSC 220 or IFMG 230 or equivalent programming course

Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of controls for application programs and systems is covered. Audit software packages are examined.

**IFMG 390 Database Theory and Practice** 3c-01-3cr

**Prerequisite:** IFMG 210 or IFMG 230 or COSC 220

Reviews database design, data model methodologies, physical data structure, and database development and implementation. Introduces the remote data service, transaction server, and database administration. Emphasizes the practical approach in accessing the database using Internet technology. (Offered as IFMG 450 prior to 2010-2011)

**IFMG 451 Systems Analysis** 3c-01-3cr

**Prerequisite:** IFMG 250 and 255 or COSC 220

Develops an understanding of concepts and techniques involving conventional and structured approaches to analyzing problems of business information systems and systems definition feasibility, as well as quantitative and evaluative techniques of business information systems analysis.

**IFMG 455 Data Warehousing and Mining** 3c-01-3cr

**Prerequisites:** IFMG 390 or 261 or COSC 441, and MATH 214 or 216

Introduces the strategies, technologies, and techniques associated with this growing MIS specialty area. Composed of two main parts: 1) learn the basic methodology for planning, designing, building, using, and managing a data warehouse, and 2) learn how to use different data mining techniques to derive information from the data warehouse for strategic and long-term business decision making.

**IFMG 460 Analysis and Logical Design** 3c-01-3cr

**Prerequisites:** IFMG 210, 230, 352, 390

Involves teaching the tools and techniques required for the analysis and design of a business system. Along with in-class discussions of the principles and techniques for analyzing, designing, and constructing the system, the students also formulate system teams in order to analyze the problems of an existing business information system, to design an improved system, and to control the implementation of the new system.

**IFMG 465 ERP Technical Fundamentals** 3c-01-3cr

**Prerequisite:** IFMG 390 or instructor permission

Provides a fundamental understanding of Enterprise Resource Planning (ERP) Software. Shows students how to use ERP and its various function modules and provides an understanding of the IS implementation, technical, managerial, coding, and reporting skills necessary to successfully incorporate ERP into a business enterprise.

**IFMG 470 Systems Design** 3c-01-3cr

**Prerequisite:** IFMG 451

A study of tools and techniques for design of a business system. Along with classroom discussions of principles and techniques for analyzing, designing, and constructing the system, students formulate system teams to analyze the problems of an existing business information system, to design an improved system, and to control implementation of a new system.

**IFMG 475 Project Management and Implementation** 3c-01-3cr

**Prerequisite:** IFMG 460

Introduces the demands made on the project manager and the nature of the manager's interaction with the rest of the parent organization in development of a Business Information System. Studies the difficult problems associated with conducting a project using people and organizations that represent different cultures and politics and that may be separated by considerable distances. Also covers how to implement and carry out the development of the project using several Information Systems development methodologies.

**IFMG 480 Distributed Business Information Systems** 3c-01-3cr

**Prerequisite:** IFMG 250

A study of the techniques involved in planning, designing, and implementing distributed processing systems. Distributed marketing, financial, and corporate accounting systems are included.

**IFMG 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**IFMG 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval based on academic appropriateness and availability of resources.

**IFMG 485 Seminar: IS Current Topics** 3c-01-3cr

**Prerequisites:** IFMG 300, senior standing

Current topics and issues in information systems in the business environment are addressed through systematic coverage of current literature and/or electronic sources. Practitioner publications and academic journals integrate emerging technologies and information issues with identification of their impact on the management of business organizations. Not a capstone requirement but a vehicle to explore a variety of topics in the field.

**IFMG 493 Internship in MIS** var-3-12cr

**Prerequisites:** IFMG 352 and 390, consent of department chairperson  
Positions with participating business, industry, or governmental organizations provide the student with experience in systems analysis. Note: Course can be taken as a 3cr major-area elective requirement.

**INDS: Interior Design**

**Department of Human Development and Environmental Studies  
College of Health and Human Services**

**INDS 105 Introduction to Interior Design** 3c-01-3cr

Presents an overview of interior design, including an introduction to design, selection, and application of components in the interior environment. Emphasizes development of effective design problem-solving skills.

**INDS 118 Drafting for Construction I** 1c-31-3cr

Introduces two- and three-dimensional graphic skills, including basic drawing, drafting, delineating, perspective drawing; applies principles and elements of design; stresses graphic design and layout.

**INDS 205 Color Theory and Application** 3c-01-3cr

The theoretical basis of color is presented as it relates to the human visual system, light, pigment, perception, and measurement. The application of color theory is discussed in terms of interior design, merchandising, and display.

**INDS 213 Residential Appliances and Consumer Electronics** 2c-21-3cr

Consumer education in the selection, use, and care of home equipment appliances and consumer electronics; the relationship of energy sources and utilities to major appliances, portable and personal care appliances, and consumer electronics.

**INDS 218 Drafting for Construction II** 1c-31-3cr

**Prerequisite:** INDS 118

Introduces basic computer-aided drafting and design (CADD) for designers; emphasizes CADD theory and the value of the computer as a problem-solving, design tool.

**INDS 230 Presentation for Interior Design** 1c-31-3cr

**Prerequisite:** INDS 118

A studio, project-based, course introducing visualization approaches used for design criticism and professional presentations of interior design. Focuses on three-dimensional drawing, including perspective, isometric, and section drawings as well as the use of color to create depth and understanding of two-dimensional drawings.

**INDS 240 Three-Dimensional Design for Interior Design** 1c-31-3cr

**Prerequisite:** INDS 118

An introduction to three-dimensional design thinking and presentation. Exploratory exercises strengthen three-dimensional conceptual skills of interior space. Technical studies investigate presentation techniques, model-making, spatial theory analysis, and vocabulary.

**INDS 281 Special Topics** 3c-01-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**INDS 305 Interior Lighting** 3c-01-3cr

**Prerequisite:** INDS 105 or equivalent

Lighting fundamentals applicable to the environmental design of residential and commercial spaces. Includes calculation methods, terminology, theory of color visibility, light source alternatives, fixture function and selection, lighting trends, and related professional organizations.

**INDS 310 Human Factors in Interior Design** 3c-01-3cr

**Prerequisite:** Junior standing

The study of human and technology systems interface as related to interior design. Emphasizes ergonomic and economic decision making to insure that

the user can function with a minimum of stress and a maximum of efficiency.

**INDS 312 Housing and Culture** 3c-01-3cr  
Managerial, sociological, economic, and aesthetic aspects of housing and people are investigated as well as a consideration of the environment of the home as part of the community.

**INDS 313 Materials and Finishes** 3c-01-3cr  
**Prerequisite:** FSMR 314  
An introduction to the modern and historic use and maintenance of materials in architecture, construction, and interior design and the codes and costs that govern their use today. Consideration is given to contemporary methods of harvesting, preparation, and manufacture of building materials and the evaluation of the impact of these processes on the environment.

**INDS 315 Residential Design I** 1c-31-3cr  
**Prerequisite:** INDS 218  
Applies interior design space planning and design problem-solving processes to residential design and emphasizes graphic communication and presentation of solutions.

**INDS 319 Residential Design II: Kitchen, Bath, Media Room Design** 1c-31-3cr  
**Prerequisite:** INDS 315  
Design elements are applied to kitchen, bath, and media room areas of the residence to provide design solutions supporting individual needs and changing lifestyles. Addresses the needs of special populations. Current national standards are addressed.

**INDS 370 Development of Design I** 3c-01-3cr  
A chronological study from ancient times to the mid-nineteenth century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. Emphasizes stylistic detail and its relationship to social, economic, political, religious, and aesthetic influence and to the contemporary scene.

**INDS 380 Development of Design II** 3c-01-3cr  
**Prerequisite:** INDS 370  
A chronological study from mid-nineteenth century to the present of the dominant influences and characteristics of the twentieth-century interior, furniture, and ornamental design. Emphasizes stylistic detail and its relationship to social, economic, political, religious, and aesthetic influences and to contemporary usage.

**INDS 405 Interior Design Professional Practice** 3c-01-3cr  
**Prerequisite:** Junior standing  
Planning, business organization, management, contracts, procedures, and ethics for the professional interior designer.

**INDS 433 Study Tour** var-1-6cr  
**Prerequisite:** Upper-level standing  
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. May be repeated for a total of 6cr. (Cross-listed as CNSV/FSMR 433)

**INDS 464 Contract Design I** 1c-31-3cr  
**Prerequisite:** INDS 319  
Applies interior design space planning and design problem-solving processes to nonresidential design and links goals in interior design and facility management.

**INDS 465 Contract Design II** 1c-31-3cr  
**Prerequisite:** INDS 464  
A studio, project-based course, ascertaining the process to be followed in developing large-scale nonresidential interior design schemes of over 10,000 square feet.

**INDS 481 Special Topics** 3c-01-3cr  
**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**INDS 482 Independent Study** var 1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**ITAL: Italian**  
**Department of French and German**  
**College of Humanities and Social Sciences**

**ITAL 101 Basic Italian I** 3c-01-3cr  
Introduces the Italian language, with emphasis on the four basic skills: reading, writing, speaking, and listening. Students also gain knowledge of Italian culture. Primary emphasis is on the mastery of oral communication and basic writing skills. Attendance and language lab practice are required.

**ITAL 102 Basic Italian II** 3c-01-3cr  
**Prerequisite:** ITAL 101 or equivalent  
A continuation of Basic Italian I. Introduces the Italian language, with emphasis on the four basic skills: reading, writing, speaking, and listening. Also imparts knowledge of Italian culture. Primary emphasis is on the continuing mastery of oral communication and writing skills. Attendance and language lab practice are required.

**ITAL 201 Intermediate Italian III** 3c-01-3cr  
**Prerequisites:** ITAL 101 and 102 or equivalent  
An intermediate-level course for students who have previously studied Italian. A continuation of mastery of the four skills: reading, writing, speaking, and listening. Also increases knowledge of Italian history, culture, and literature.

**ITAL 202 Intermediate Italian IV** 3c-01-3cr  
**Prerequisite:** ITAL 201 or equivalent  
An intermediate-level course for students who have previously studied Italian. Continues student progress in the mastery of the four skills: reading, writing, speaking, and listening. Emphasizes increasing proficiency in reading and writing. Also increases knowledge of Italian history, culture, and literature.

**ITST: International Studies**  
**Department of Political Science**  
**College of Humanities and Social Sciences**

**ITST 281 Special Topics in Non-Western Studies** var-1-3cr  
Focuses on politics, society, and culture of a particular non-Western country or area. Content is variable, depending on the semester. Taught by visiting exchange professors from non-Western countries. This special topics course may be offered on a continuing basis.

**ITST 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**JRNL: Journalism**  
**Department of Journalism**  
**College of Humanities and Social Sciences**

**JRNL 102 Basic Journalistic Skills** 3c-01-3cr  
Required for journalism majors and minors. Emphasizes grammar, punctuation, spelling, *AP Stylebook*, copyediting, headlines, and accuracy.

<b>JRNL 105 Journalism and the Mass Media</b>	<b>3c-01-3cr</b>	<b>JRNL 337 Editing</b>	<b>3c-01-3cr</b>
A critical examination of roles-goals of newspapers, magazines, radio, books, movies, and television as they affect American society socially, politically, and economically.		<b>Prerequisites:</b> JRNL 102, 220	
		Stresses basic practices such as copyediting and headline writing while also focusing on guidelines for improving accuracy, clarity, transition, spelling, and punctuation of copy. Students use wire service stylebook extensively.	
<b>JRNL 120 Journalistic Writing</b>	<b>3c-01-3cr</b>	<b>JRNL 344 Issues and Problems</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> ENGL 101, nonmajors/minors		<b>Prerequisites:</b> JRNL 102, 120 or 220	
Emphasizes intelligent use of writing ability in a journalistic style and understanding of the why of journalism and mass media. Practices and improves writing skills.		Examines critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.	
<b>JRNL 220 Writing for the Print Media</b>	<b>3c-01-3cr</b>	<b>JRNL 345 Sports Journalism</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> JRNL 102 (grade of C or better), majors only		<b>Prerequisite:</b> JRNL 220	
A course in journalistic style for students who plan to become professional writers. Teaches the basic journalistic formats and strategies used in print media such as the summary lead, the delayed lead, and the conventional news-story format. Throughout, emphasizes economy, clarity, and the development of voice for a given medium.		Emphasizes skills for covering, writing, and editing of sports and introduces specific practices in newspaper, radio-TV, and sports information work.	
<b>JRNL 223 Photojournalism</b>	<b>3c-01-3cr</b>	<b>JRNL 347 Journalism Law</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> Junior/senior standing		<b>Prerequisites:</b> JRNL 328, junior/senior standing	
An introduction to still photography for news media. Includes preparation of a portfolio and learning of specialized processing techniques for high-speed work.		Open to nonmajors by instructor permission. A survey of the major Supreme Court and state court rulings governing the mass media, especially the news media. Areas include libel, antitrust, free press/fair trial, privacy. Approach is nontechnical.	
<b>JRNL 243 History of the American Press</b>	<b>3c-01-3cr</b>	<b>JRNL 348 Opinion Writing</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> JRNL 120 or 220		<b>Prerequisite:</b> Junior/senior standing	
Traces the development of the American press from its Colonial roots. Emphasizes the role of the press in political and social development.		Emphasizes the writing of vigorous but thoughtful and fair editorials. Study of contemporary practice and policy on letters to the editor, columnists, cartoons, the op-ed page.	
<b>JRNL 250 Women and the Press</b>	<b>3c-01-3cr</b>	<b>JRNL 375 World News Coverage</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> ENGL 101, sophomore standing		<b>Prerequisite:</b> Sophomore standing	
Explores the role of women in American journalism. Includes study of lives/careers of women journalists and their specific contributions to the profession. Emphasizes evolution of equal opportunity for women and other minorities in the American Press. Attention to the changing definition of news as influenced by the inclusion of women and minorities in editorial roles.		Deals with international news events and analysis of international news coverage in sources from around the world. Emphasizes analyzing comparative coverage of events in different sources. Students study not only current international news but also how it is reported. The goal of the course is fostering a critical attitude toward news.	
<b>JRNL 261 Introduction to the Magazine Industry</b>	<b>3c-01-3cr</b>	<b>JRNL 400 Professional Preparation</b>	<b>1c-01-1cr</b>
<b>Prerequisite:</b> Sophomore standing or instructor permission		<b>Prerequisites:</b> Junior standing, JRNL major	
Introduces the magazine industry, how it is managed, how it functions, its strategies, and its roles and goals in society.		Prepares majors for the professional world by exploring short- and long-term career goals, creating materials for self-marketing, and managing the personal and behavioral transition from college to the workplace in newspapers, magazines, public relations, and visual journalism.	
<b>JRNL 281 Special Topics</b>	<b>var-1-3cr</b>	<b>JRNL 423 Management in Mass Communications</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> As appropriate to course content		<b>Prerequisite:</b> JRNL 493 or field experience	
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.		Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.	
<b>JRNL 321 Feature Writing</b>	<b>3c-01-3cr</b>	<b>JRNL 427 Publications</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> JRNL 102, 220		<b>Prerequisite:</b> JRNL 327 or instructor permission	
For the student who might work in journalism or who might wish to write on a part-time or free-lance basis.		Provides advanced techniques and theories of publications design, including the legibility principles of typography, the psychological impact of color and paper, and designing online publications, such as newspapers, newsletters, and magazines. Also teaches principles and concepts of publications management, including coping with deadline pressures, the creative disposition, and the marketing of publications. The class produces a total publication.	
<b>JRNL 326 Public Relations I</b>	<b>3c-01-3cr</b>	<b>JRNL 430 Public Opinion and the News Media</b>	<b>3c-01-3cr</b>
<b>Prerequisites:</b> JRNL 102, 120 or 220		<b>Prerequisite:</b> Junior standing	
Introduces the principles, practices, programs, and possibilities in the various areas of public relations.		Deals with understanding and measuring public opinion. Emphasizes critically analyzing the historical origins and the dynamics of public opinion in the policymaking process as well as the role of the news media in public opinion. Students then measure people's thinking on any given issue or issues.	
<b>JRNL 327 Layout, Design, and Production</b>	<b>2c-3l-3cr</b>	<b>JRNL 446 Research Methods in Journalism</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> JRNL 105		<b>Prerequisite:</b> JRNL 328 or instructor permission	
Provides basic techniques and theories of layout, design, and production, including typography, copyfitting, photo/art cropping and scaling, and steps in design process. Includes traditional paste-up and desktop publishing in the design of ads, newspapers, newsletters, brochures, and magazines.		Explores theoretical and practical issues in information gathering, with emphasis on data analysis and computer-assisted reporting for public affairs	
<b>JRNL 328 News Reporting</b>	<b>3c-01-3cr</b>		
<b>Prerequisites:</b> Grade of C or better in JRNL 102, 105, and 220; majors only			
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.			

journalism. Students apply scientific methods in news reporting and analyze the effects of precision journalism on society.

**JRNL 450 Advertising Writing** 3c-01-3cr

**Prerequisites:** JRNL 220, instructor permission

A basic course in the preparation of advertising copy and continuity for all media. A combination of lecture and laboratory course. Enrollment is limited to upperclass majors.

**JRNL 455 High School Journalism** 3c-01-3cr

**Prerequisite:** Junior standing or permission

Aimed at equipping students with basic skills in teaching and student media advising at the high school level. Offers a package of skills ranging from basic elements of news, news writing, editing, newspaper layout and design, to student publications advising as well as legal and ethical issues in high school journalism. Open to nonmajors.

**JRNL 466 Community Journalism** 3c-01-3cr

**Prerequisites:** Junior standing, permission

Emphasizes practical knowledge and skills in identifying, covering, and writing professionally about community issues and events, including local government, public affairs, the courts, and breaking news. Students also learn how to interview community leaders and use a variety of sources to access relevant information.

**JRNL 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

These courses vary from semester to semester, covering a number of journalism specialties. From time to time they are converted to permanent course numbers. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**JRNL 482 Independent Study** var-1-6cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Opportunities for independent study that go beyond the usual classroom activities. Approval based on academic appropriateness and availability of resources; enrollment is limited to fifteen upperclass majors per semester.

**JRNL 490 Public Relations II** 3c-01-3cr

**Prerequisites:** JRNL 220, 326

A public relations writing class that includes assignments such as releases, features, newsletters, reports, biographies, rewrites, hometown stories, copyediting, interviewing, research, and special projects.

**JRNL 491 Presentation Making** 3c-01-3cr

**Prerequisites:** JRNL 220, 326

Gives practice in writing and making oral presentations based on public relations cases and problems. Familiarizes the student with problem-solving and small-group communication skills necessary for those working in the area of public affairs.

**JRNL 492 Problem Solving in Public Relations** 3c-01-3cr

**Prerequisite:** JRNL 328

Introduces techniques for analyzing and tracking information flow in organizations. Introduces creative problem-solving techniques which are standard practice in corporate research groups.

**JRNL 493 Internship** var-6-12cr

**Prerequisites:** Grade of C or better in JRNL 102, 105, 220, 328; department approval

On-the-job training opportunities in journalism and related areas. Maximum of 6cr may be applied to 30cr minimum of major.

**LAS: Latin American Studies**  
**College of Humanities and Social Sciences**

**LAS 281 Special Topics in Latin American Studies** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**LAS 370 Latinos and Diasporas** 3c-01-3cr

Introduces the global and local dimensions of the changing Latino communities in the United States and examines the communities' multiple connections and dynamic interactions with Latin American diasporas. Towards this end, the course covers: 1) theories on transnational communities, diasporas, the state, and citizenship; 2) Latino cultures and geography; 3) Latin American immigration and labor migration to the United States; and 4) the impact of Latin American diasporic networks on Latino and non-Latino communities. (Cross-listed as ANTH 370)

**LAS 480 Latin American Studies Seminar** 3c-01-3cr

A multidisciplinary colloquium emphasizing reading, discussion, and writing on specialized topics related to Latin American society, culture, history, literature, politics, geography, economics, and business. Topics include, but are not limited to, the nature of Pre-Columbian cultures; the effects of colonialism and independence on present-day Latin America; the relationship between Latin America and the United States, Africa, and Europe; and the growing presence and significance of people of Hispanic descent in the United States. Open to all majors; required for LAS minors.

**LAS 481 Special Topics in Latin American Studies** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**LBST: Liberal Studies**  
**Liberal Studies Program**  
**Academic Affairs Division**

**LBST 499 Senior Synthesis** 3c-01-3cr

**Prerequisite:** 73cr or more earned

Helps students understand and handle complex intellectual and social issues from multiple perspectives. A selection of topics, available each semester and summer session, is announced and described in the undergraduate course schedule. Students should schedule the course during the senior year or at least no earlier than the last half of the junior year. In order to broaden their experiences, students are encouraged to enroll in synthesis sections taught by instructors outside of the students' major fields.

**LIBR: Library**  
**The University Libraries**  
**Academic Affairs Division**

**LIBR 151 Introduction to Library Resources** var-1cr

A lecture/laboratory course (fourteen one-hour classes) which provides an introduction to the resources of a university library, how those resources are organized, and how to use those resources effectively.

**LIBR 201 Internet and Multimedia** 3c-01-3cr

**Prerequisite:** BTED/COSC/IFMG 101 or prior exposure to word processing and electronic mail

Focuses on the evaluation of information and multimedia resources available on electronic networks when doing research in an area of one's choice. An information literacy course is for students to gain a more in-depth understanding of the information resources available electronically and of how to utilize them more effectively in communicating. Students learn how to access and utilize these resources for two-way communications and support for decision making while incorporating selected elements in multimedia presentations of their own design. (BTED/COMM/COSC/IFMG/ LIBR 201 may be used interchangeably for D or F repeats and may not be counted for duplicate credit.)

**LIBR 251 Information Access in the Digital Age** 2c-01-2cr

An introduction to library research equips the student with information literacy skills so that the student is able to determine the extent of information needed; access the needed information effectively and efficiently; evaluate information and its sources critically; incorporate selected information into one's knowledge base; use information effectively to accomplish a specific purpose; understand the economic, legal, and social issues surrounding the use of information; and access and use information

ethically and legally. Provides conceptual and practical expertise as an information networker to locate, evaluate, and use effectively the needed information. Basic knowledge of computer applications is helpful.

**LIBR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**LIBR 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MATH: Mathematics**

**Department of Mathematics**

**College of Natural Sciences and Mathematics**

**MATH 100 Intermediate Algebra** 3c-01-3cr

**Note:** May not be taken after successfully completing MATH 105 or 110 or a calculus course without written Mathematics Department chairperson approval

Basic course in algebra including factoring, exponents and radicals, systems of linear equations, complex fractions, and inequalities. For those students who lack the basic algebraic skills required in MATH 105 or 110. Will not meet Liberal Studies math requirements.

**MATH 101 Foundations of Mathematics** 3c-01-3cr

Introduces logic and mathematical way of analyzing problems; develops an appreciation for nature, breadth, and power of mathematics and its role in a technological society; introduces useful mathematics or mathematics related to student interest. Possible topics include logic, problem solving, number theory, linear programming, probability, statistics, intuitive calculus, introduction to computers, mathematics of finance, game theory.

**MATH 105 College Algebra** 3c-01-3cr

**Prerequisite:** MATH 100 or appropriate Placement Test Score or permission of the Mathematics Department chairperson  
**Note:** May not be taken after successfully completing either a calculus course or MATH 110 without written Mathematics Department chairperson approval

Prepares students for the study of calculus for business, natural, and social sciences. Topics include detailed study of polynomial, exponential, and logarithmic functions.

**MATH 110 Elementary Functions** 3c-01-3cr

**Prerequisite:** MATH 100 or appropriate Placement Test Score or permission of the Mathematics Department chairperson  
**Note:** May not be taken after successfully completing a calculus course without written Mathematics Department chairperson approval  
Prepares mathematics and science students for the study of calculus. Topics include detailed study of polynomial, exponential, logarithmic, and trigonometric functions.

**MATH 115 Applied Mathematics for Business** 3c-01-3cr

**Prerequisites:** MATH 105 or 110 or appropriate Placement Test score or permission of the Mathematics Department chairperson  
**Note:** May not be taken after successfully completing a calculus course without written Mathematics Department chairperson approval  
A review of elementary functions, including logarithmic and exponential functions. Business majors are introduced to the central ideas of the calculus (limit, derivative, and integral). Applications to business and economics are emphasized.

**MATH 117 Principles of Mathematics** 3c-01-3cr

An introduction to the nature of mathematics, designed specifically as a first course for Mathematics Education majors to experience several facets of mathematics including deduction, induction, problem solving, discrete

mathematics, and theory of equations. Enrollment open to Secondary Mathematics Education majors only.

**MATH 121 Calculus I for Natural and Social Sciences** 4c-01-4cr

**Prerequisite:** MATH 105 or 110 or appropriate Placement Test Score or permission of the Mathematics Department chairperson  
**Note:** May not be taken after successfully completing a calculus course without written Mathematics Department chairperson approval  
A review of elementary functions, including logarithmic and exponential functions. Natural and Social Science majors are introduced to the central ideas of calculus, including limit, derivative, and integral. Applications to natural and social sciences are emphasized.

**MATH 122 Calculus II for Natural and Social Sciences** 4c-01-4cr

**Prerequisite:** MATH 121  
Applications of integrals to natural and social sciences, functions of several variables, trigonometric functions, sequences and series, numerical methods, and differential equations.

**MATH 123 Calculus I for Physics, Chemistry, and Mathematics** 4c-01-4cr

**Prerequisites:** High school algebra, geometry, and trigonometry  
Functions, limits, continuity, derivatives, application of the derivative, integral, and applications of the integral. (Trigonometric and inverse trigonometric functions are included throughout the course.)

**MATH 124 Calculus II for Physics, Chemistry, and Mathematics** 4c-01-4cr

Logarithmic and exponential functions, techniques of integration, sequences and series, differential calculus of functions of several variables, multiple integrals, line integrals, surface integrals, differential equations with application to physical problems.

**MATH 125 Calculus I/Physics, Chemistry, Mathematics** 3c-01-3cr

**Prerequisite:** MATH 110 or equivalent placement (algebra, geometry, and trigonometry)  
The first of a three-semester sequence for math and science majors covering the theory of calculus and its application in problem solving. Topics include functions, limits, continuity, derivatives, applications of derivative, integrals, and applications of the integral. (Trigonometric, exponential, and logarithmic functions are included throughout the course.)

**MATH 126 Calculus II/Physics, Chemistry, Mathematics** 3c-01-3cr

**Prerequisite:** MATH 125 or the equivalent  
The second of a three-semester sequence for math and science majors. Topics include techniques and applications of integration, sequences and series, convergence tests, Taylor polynomials, separable differential equations, vectors, and three-dimensional coordinates. (Trigonometric, exponential, and logarithmic functions are included throughout the course.)

**MATH 151 Elements of Mathematics I** 3c-01-3cr

**Prerequisite:** Appropriate Major: ELED, ECED, EDEX, SPLP, EDHL, FCSE, ARED, CDFR, MIDL, or ECSP  
Topics include sets, concepts of logic, mathematical systems, systems of numeration, developing the set of integers, rational numbers, and real numbers.

**MATH 152 Elements of Mathematics II** 3c-01-3cr

**Prerequisite:** MATH 151  
Topics include organizing and analyzing data, statistics, probability, geometric shapes, measurement, congruence and similarity, coordinate geometry, and transformational geometry.

**MATH 153 Elements of Algebra** 3c-01-3cr

**Prerequisite:** MATH 151  
Explores some of the basic algebraic concepts including the real number system and solving linear equations and inequalities with one and two variables. An emphasis will also be placed on studying the coordinate plane, exploring the slope of a line, graphing lines, and writing equations of lines. Connections will be made with the teaching and learning of algebraic concepts in the elementary and middle schools.

- MATH 171 Introduction to Linear Algebra** 3c-01-3cr  
An introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.
- MATH 214 Probability and Statistics for Business Majors** 3c-01-3cr  
Studies the methods of describing data, probability theory, discrete and continuous random variables, sampling distributions, estimation and tests of hypothesis for means, proportions and variance, and simple linear regression and correlation.
- MATH 216 Probability and Statistics for Natural Sciences** 3c-01-3cr  
**Prerequisite:** MATH 121 or 125  
Frequency distributions, graphical representations of data, measures of central tendency and variation, correlation and regression, probability, probability distributions, and sampling distributions. Inferential statistics including confidence intervals and parametric and nonparametric tests of hypotheses. Emphasis is on applications in the natural sciences using graphing calculators and statistical software.
- MATH 217 Probability and Statistics** 3c-01-3cr  
(For non-MATH majors) Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis is on applications as opposed to theoretical development of topics.
- MATH 219 Discrete Mathematics** 3c-01-3cr  
**Prerequisite:** COSC 110 and MATH 122 or 125  
Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these to various areas of computer science. Emphasizes developing an intuitive understanding of basic structures rather than formal theories and influence of these topics on theory and practice of computing.
- MATH 225 Calculus III/Physics, Chemistry, Mathematics** 3c-01-3cr  
**Prerequisite:** MATH 126 or the equivalent  
The third of a three-semester sequence for math and science majors. Topics covering the calculus of functions of several variables include vector functions and space curves, arc length, curvature, partial derivatives, gradients, areas and volumes in various coordinate systems, Lagrange multipliers, line integrals, Green's Theorem, and applications of multiple integrals. (Trigonometric, exponential, and logarithmic functions are included throughout the course.)
- MATH 241 Differential Equations** 3c-01-3cr  
**Prerequisites:** MATH 122 or 126  
Emphasizes techniques of solution and applications of differential equations. Topics include first order equations, second order linear equations, systems of linear equations, and series solutions of differential equations.
- MATH 250 Introduction to Numerical Methods** 3c-01-3cr  
**Prerequisites:** COSC110, MATH 121 or 125  
Algorithmic methods for function evaluation, roots of equations, solutions to systems of linear equations, function interpolation, numerical differentiation, and integration and use of spline functions for curve fitting. The focus is on managing and measuring errors in computation. Also offered as COSC 250; either MATH 250 or COSC 250 may be substituted for the other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.
- MATH 271 Introduction to Mathematical Proofs I** 3c-01-3cr  
**Prerequisites:** MATH 121 or 125; 171  
Gives basic ideas necessary to prove results in mathematics. Includes but is not limited to logic of mathematics, basic methods of proof, algebra of sets, equivalence relations and partitions of sets, functions, and mathematical induction.
- MATH 272 Introduction to Mathematical Proofs II** 3c-01-3cr  
**Prerequisites:** MATH 126 and 271 with a grade of C or better  
A further study of the basic ideas of contemporary mathematics. Topics include but are not limited to mathematical induction, cardinality of sets, relations, methods of proof in number theory, analysis, and algebra.
- MATH 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.
- MATH 317 Probability and Statistics for Elementary/Middle-Level Teachers** 3c-01-3cr  
**Prerequisite:** MATH 152  
Introduces concepts of probability and statistics by exploring and discovering key ideas related to data analysis and making predictions. Appropriate technology is incorporated throughout the course. Explores curricular materials, resources, and activities relevant to teaching diverse groups at the Elementary/Middle Level.
- MATH 320 Mathematics for Early Childhood** 3c-01-3cr  
**Prerequisites:** MATH 152, ECED 200  
Studies child-centered, activity-oriented mathematics programs for early childhood education (PreK-Grade 1). Focuses on helping children develop understanding and insight into basic concepts of mathematics through the use of manipulative materials.
- MATH 340 Principles of Secondary School Mathematics** 3c-01-3cr  
**Prerequisite:** MATH 271  
Provides the mathematics content needed to teach in secondary schools. Connections are made between advanced and secondary school mathematics. Open to secondary mathematics education majors only.
- MATH 342 Advanced Mathematics for Applications** 4c-01-4cr  
**Prerequisites:** MATH 122 or 225; 241  
Deals with the application of mathematics to problems of science. Emphasizes the three phases of such an application and the development of skills necessary to carry out each step: 1) translation of the given physical information to a mathematical model; 2) treatment of the model by mathematical methods; 3) interpretation of the mathematical result in physical terms. Topics include vector calculus, integral theorems, Fourier series, partial differential equations, and the Laplace transformation.
- MATH 350 History of Mathematics** 3c-01-3cr  
**Prerequisite:** MATH 122 or 126 or instructor permission  
Development of the central concepts of mathematics from ancient times up to the development of calculus in the seventeenth century. Mathematical concepts are placed in historical perspective. The use of the history of mathematics as a pedagogical tool and its relationship to other sciences is addressed.
- MATH 353 Theory of Numbers** 3c-01-3cr  
**Prerequisite:** MATH 271 with a grade of C or better  
Divisibility, congruences, primitive roots, number theoretic functions, Diophantine equations, continued fractions, quadratic residues.
- MATH 355 Foundations of Geometry I** 3c-01-3cr  
**Prerequisites:** MATH 171, 271 with a grade of C or better  
Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity and affine and projective groups of transformations are studied.
- MATH 363 Mathematical Statistics I** 3c-01-3cr  
**Prerequisites:** MATH 216; 225 (may be taken concurrently)  
Probability theory necessary for an understanding of mathematical statistics is developed. Applications of set theory to models, combinations and permutations, binomial, Poisson and normal distributions, expected values, and moment generating functions.
- MATH 364 Mathematical Statistics II** 3c-01-3cr  
**Prerequisite:** MATH 363  
Multivariate distributions, change of variable technique, chi-square distribution, estimation, confidence intervals, hypothesis testing, contingency tables, goodness of fit. Practical applications are used to aid in the development.

- MATH 366 Preparation for Actuarial Examinations** 1c-01-1cr  
**Prerequisites:** MATH 171 and calculus sequence  
 An introduction to the actuarial profession which also helps the student prepare for the first actuarial examinations. The examination preparation consists of studying sample actuarial examinations and related material. Student is required to take the actuarial examination. Student should be aware that for most students, considerable study beyond the requirements of this 1cr course is required in order to pass the actuarial examinations.
- MATH 371 Linear Algebra** 3c-01-3cr  
**Prerequisites:** MATH 171, 271 with a C or better grade  
 Vector spaces and linear transformations are studied in a theoretical setting. Also, canonical forms and multilinear algebra are studied.
- MATH 413 Methods of Teaching Mathematics at the Middle Level** 3c-01-3cr  
**Prerequisites:** MATH 152, MIDL 315  
 Examines the current curricula and methods of instruction used in middle-level classrooms. Follows an investigative approach to middle-level mathematics instruction through hands-on activities that are standards based. Explores methods of teaching in diverse classrooms and teaching students with special needs.
- MATH 417 Statistical Applications** 3c-01-3cr  
**Prerequisites:** MATH 214, 216, or 217 (for non-MATH majors)  
 Using computer programs, a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction are reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. Emphasizes use of the computer and interpretation of computer printouts, along with understanding techniques employed. No computer knowledge is necessary.
- MATH 418 Sampling Survey Theory and Its Application** 3c-01-3cr  
**Prerequisites:** (For non-MATH majors) MATH 214, 216, or 217  
 Directed to the student who is or will be doing quantitative research, commissioning large-scale surveys, and evaluating the results. Sampling techniques and statistical principles underlying their use are introduced. Consideration to the practical problems associated with implementation.
- MATH 420 Patterns and Functions for Elementary/Middle-Level Teachers** 3c-01-3cr  
**Prerequisite:** MATH 152  
 Examines and develops expertise with sequences, patterns, and functions, including linear, quadratic, logarithmic, exponential, and trigonometric functions. Appropriate technology is incorporated throughout the course. Explores curricular materials, resources, and activities relevant to teaching diverse groups at the Elementary/Middle Level.
- MATH 421 Advanced Calculus I** 3c-01-3cr  
**Prerequisite:** MATH 272 with a grade of C or better  
 A study of set theory, real number system, functions, topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.
- MATH 422 Advanced Calculus II** 3c-01-3cr  
**Prerequisite:** MATH 421  
 Includes the study of convergence sequences in  $R^n$ , global properties of continuity, uniform continuity, differentiation of  $R^n$ , Riemann integrals, and infinite series.
- MATH 423 Complex Variables** 3c-01-3cr  
**Prerequisite:** MATH 225  
 An introduction to the theory of functions of a complex variable: topics included are elementary functions, analytic functions, conformal mapping, integration, series, and application.
- MATH 425 Applied Mathematical Analysis I** 3c-01-3cr  
**Prerequisites:** Calculus sequence, introductory linear algebra, or instructor permission  
 Provides the necessary background for an understanding of mathematical programming, proofs of convergence of algorithms, convexity, and factorable functions. Also develops necessary concepts in matrix theory which are required to develop efficient algorithms to solve linear and nonlinear programming models.
- MATH 427 Introduction to Topology** 3c-01-3cr  
**Prerequisite:** MATH 272 with a grade of C or better  
 A study of sets, functions, continuity, compactness, the separation axioms, and metric spaces; application of topology to analysis is demonstrated.
- MATH 430 Seminar in Teaching Secondary School Mathematics** 3c-01-3cr  
**Prerequisites:** Junior status (60cr or more), a declared major in Mathematics Education, and EDUC 242 with a grade of C or better  
 Provides insights into the teaching and learning of numbers and operations, algebra, geometry, measurement, probability, and statistics. Students become aware of and use the resources and methods of instruction for teaching mathematics at the secondary level. Must be taken within two semesters prior to student teaching.
- MATH 445 Deterministic Models in Operations Research** 3c-01-3cr  
**Prerequisites:** MATH 122 or 225; 171  
 An introduction to using the basic tools of solving deterministic models in operations research. Includes optimization techniques and applications such as linear programming, nonlinear and dynamic programming, transportation models, and network models. In addition, sensitivity analysis, duality, simplex methods, and integer programming are discussed. Uses technology to solve problems and interpret the results.
- MATH 446 Probabilistic Models in Operations Research** 3c-01-3cr  
**Prerequisites:** MATH 122 or 225; 171; 216  
 A survey of probabilistic methods for solving decision problems under uncertainty. Probability review, decision theory, queuing theory, inventory models, and Markov chains are covered. Uses technology to solve problems and interpret the results.
- MATH 447 Modeling and Simulation** 3c-01-3cr  
**Prerequisites:** MATH 122 or 126; 171; 216  
 Construction and solution of mathematical models. Emphasizes applications in areas such as logistics, natural and social sciences, and manufacturing. Discrete and continuous system models are analyzed using mathematical and computer-based methods. An introduction to computer simulation. An introductory course in differential equations is recommended but not required.
- MATH 450 Topics in Applied Computational Mathematics** 3c-01-3cr  
**Prerequisites:** MATH 171, 225, and COSC/MATH 250 or instructor permission  
 Focuses on using computational methods to solve applied mathematics problems. Content varies from year to year. Students gain experience in solving practical problems, using various mathematical software packages, giving oral presentations, preparing technical reports, reading field-related journals, and integrating scientific visualization.
- MATH 451 Numerical Methods for Supercomputers** 3c-01-3cr  
**Prerequisites:** MATH 121 or 125; 171, COSC 250/MATH 250  
 Supercomputers make use of special computer architectures—vector and parallel processors—in order to achieve the fastest processing speed currently available. Students are introduced to these features and learn how numerical algorithms can be constructed to exploit supercomputers' capabilities. They gain practical experience in programming for the Cray, YMP, in incorporating existing scientific software packages into user-written programs, in submitting remote jobs to the Pittsburgh Supercomputer Center, and in producing animated graphical output to summarize the typically large volume of output data generated by large scientific programs. (Also offered as COSC 451; may not register for duplicate credit)
- MATH 452 Seminar in Teaching Algebra** var-1-4cr  
**MATH 453 Seminar in Teaching Geometry** var-1-4cr  
**MATH 454 Seminar in Teaching General Mathematics** var-1-4cr  
 For pre-student teachers, who gain insights into the problems in teaching each topic and become aware of the materials available and of methods of instruction geared to the special type of student. Education majors only.



**MATH 455 Seminar in Teaching Probability and Statistics 1c-01-1cr**  
For pre-student teachers, who gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the secondary mathematics student. Education majors only.

**MATH 456 Geometry for Elementary/Middle-Level Teachers 3c-01-3cr**  
**Prerequisite:** MATH 152

Students become acquainted with an informal, intuitive approach to geometry. Activities and materials for teaching geometrical concepts to children are an integral part of the course.

**MATH 457 Number Theory for Elementary/Middle-Level Teachers 3c-01-3cr**  
**Prerequisite:** MATH 152

An introduction to topics of elementary number theory including divisibility, prime numbers, factorization, binary numbers, modular arithmetic, identification codes, cryptography, Diophantine equations, Euclidean algorithm, and alternative algorithms. Explores curricular materials, resources, and activities relevant to teaching number theory at the Elementary/Middle Level.

**MATH 458 Logic and Logical Games for Elementary/Middle-Level Teachers 3c-01-3cr**  
**Prerequisite:** MATH 152

Basic ideas, terminology, and notation of mathematical logic as well as games of strategy that involve logic. Engages in methods of reasoning and proof in games and in mathematics content. Explores curricular materials, resources, and activities relevant to teaching logic and reasoning at the Elementary/Middle Level.

**MATH 459 Technology in Elementary/Middle-Level Mathematics Instruction 3c-01-3cr**  
**Prerequisite:** MATH 152

Develops the knowledge, skills, and perspectives required for using educational technology in teaching mathematics at the Elementary/Middle Level. Hands-on experiences with technology are an important focus.

**MATH 460 Technology in Mathematics Instruction 3c-01-3cr**  
**Prerequisite:** COSC 110, junior status, Mathematics Education major or instructor permission, and completion of EDUC 242 ("C" or better)

Laboratory based and designed to provide preservice mathematics teachers with expertise in instructional technology for teaching mathematics at the secondary level. A strong emphasis is placed upon the integration of pedagogy and subject matter knowledge. Must be taken within two semesters prior to student teaching.

**MATH 461 Discrete Mathematics for Elementary/Middle-Level Teachers 3c-01-3cr**  
**Prerequisite:** MATH 152

Topics in discrete mathematics, including systematic counting, graph coloring, networks, and their applications, as well as the historical background and the role of discrete mathematics in today's world. Uses a problem-solving, hands-on approach to content. Explores curricular materials, resources, and activities relevant to teaching discrete mathematics at the Elementary/Middle Level.

**MATH 465 Topics in Statistics 3c-01-3cr**  
**Prerequisite:** MATH 364

Correlation and regression from applied and theoretical points of view, bivariate and multivariate normal distribution, analysis of variance, non-parametric methods. Practical problems involving statistical techniques and use of computer statistical packages. Knowledge of computer programming is not required.

**MATH 471 Algebra for Elementary/Middle-Level Teachers 3c-01-3cr**  
**Prerequisite:** MATH 152

Topics include multiple representations of sequences, integers, expressions, equations, systems of equations, inequalities, and matrices. Representations of expressions and equations are explored through the use of hands-on and visual aids and with appropriate technology. Connections are made with the

teaching and learning of algebraic concepts at the Elementary/Middle Level.

**MATH 476 Abstract Algebra I 3c-01-3cr**

**Prerequisite:** MATH 272 with a grade of C or better  
Development of theory of integral domains, fields, rings, and groups; designed to develop student's power to think for himself or herself and to improve ability to construct formal proofs.

**MATH 477 Abstract Algebra II 3c-01-3cr**

**Prerequisite:** MATH 476  
Continue study of algebra by use of axiomatic method; Euclidean domains; polynomial domains and extension fields included; interrelationships between these structures and simpler structures, particularly groups and rings, are developed as in study of Galois group of a polynomial and in an introduction to Galois theory.

**MATH 480 Senior Seminar 3c-01-3cr**

**Prerequisite:** Senior standing (90 or more credits)  
Assesses the effectiveness of the mathematics curriculum and provides Mathematics majors with a culminating mathematical experience. Also focuses on synthesizing mathematics skills while researching, developing, and presenting a mathematical topic. Students solve practical problems, use various mathematical software packages, give oral presentations, and prepare technical reports.

**MATH 481 Special Topics var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MATH 482 Independent Study var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**MATH 490 Independent Study var-1-3cr**

**MATH 493 Internship in Mathematics var-3-12cr**

**Prerequisites:** Completion of core curriculum, completion of application  
Positions with participating companies or agencies provide students with experience in mathematics-related work under the supervision of the agencies and faculty. Requirements include one to three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper. Internship credit may not be used in fulfilling math major course requirements.

**MEDT: Clinical Laboratory Science**  
**Department of Nursing and Allied Health Professions**  
**College of Health and Human Services**

**MEDT 494 Clinical Microbiology var-6-10cr**

Identification and clinical pathology of bacteria, fungi, viruses, and parasites. Techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Instrumentation; quality control.

**MEDT 495 Clinical Chemistry var-7-10cr**

Enzymology, endocrinology, biochemistry of lipids, carbohydrates, and proteins; metabolism of nitrogenous end products; physiology and metabolism of fluids and electrolytes; and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophotometry, electrophoresis, chromatography, automation, and quality control.

**MEDT 496 Clinical Hematology/Coagulation var-4-7cr**

The composition and function of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

**MEDT 497 Clinical Immunohematology** var-3-6cr  
Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

**MEDT 498 Clinical Immunology/Serology** var-2-4cr  
Immune response, immunoglobulins, autoimmunity, and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests.

**MEDT 499 Clinical Seminar** var-0-6cr  
Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

#### **MGMT: Management**

#### **Department of Management**

#### **Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**MGMT 234 Introduction to Quality Control** 3c-01-3cr

**Prerequisite:** Must be enrolled in the A.S. in Electro-Optics  
Introduces the principles, philosophies, and practices of Total Quality Management (TQM) and the techniques of Statistical Quality Control including fundamentals of probability and statistics, control charts for variables and attributes, acceptance sampling, and reliability concepts.

**MGMT 275 Introduction to Entrepreneurship** 3c-01-3cr

**Prerequisite:** Sophomore status  
Entrepreneurship is defined, common myths discussed, and basic characteristics of entrepreneurs identified and reviewed. Includes topics such as psychology of entrepreneurship, economic and social aspects of entrepreneurship, history, techniques of purchasing a company, new venture initiation, and risk taking.

**MGMT 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MGMT 300 Human Resource Management** 3c-01-3cr

**Prerequisite:** PSYC 101  
Recognizes and evaluates the application of behavioral science approaches in the study of human resource management. Includes recruiting and selection, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

**MGMT 310 Principles of Management** 3c-01-3cr

Provides the student with an in-depth identification and understanding of the relevant theories, concepts, and principles underlying the management function.

**MGMT 311 Human Behavior in Organizations** 3c-01-3cr

**Prerequisite:** PSYC 101  
Focuses on human problems of management. Presents basic ideas and theories from the behavioral sciences as they apply to human behavior in organizations. Emphasizes management solutions to problems resulting from individual-organization interaction.

**MGMT 325 Small Business Management** 3c-01-3cr

**Prerequisites:** MGMT 275 or junior standing  
A survey course emphasizing aspects of small business management not covered elsewhere in the student's program. Key topics include real estate, site selection, and facilities management; purchasing management, vendor relations, and inventory systems; plant security, loss control, risk and insurance management; human resources management, employee benefits, motivation, and leadership; small business market research, customer

services management, and pricing. A review of other elements of the small firm's milieu is included as a necessary contextual element (e.g., planning, accounting, financing, law).

**MGMT 330 Production and Operations Management** 3c-01-3cr

**Prerequisites:** MATH 115, 214, junior standing, Eberly College of Business and Information Technology or approved major  
A study of converting an organization's inputs into outputs whether in goods-producing or service industries. Provides an overview of concepts, tools, and techniques used in management of the production and operations function in organizations.

**MGMT 350 International Business** 3c-01-3cr

**Prerequisite:** MGMT 310  
Studies the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MKTG 350)

**MGMT 375 Social Entrepreneurship** 3c-01-3cr

**Prerequisite:** MGMT 275 for nonbusiness majors  
For students interested in starting or working in a Not-for-Profit Enterprise (NPE). Covers topics such as financing an NPE, developing an NPE start-up model, using NPEs to generate social value, and developing an entrepreneurial philanthropy towards NPEs.

**MGMT 400 Compensation Management** 3c-01-3cr

**Prerequisite:** MGMT 300  
Studies the policies and programs that help managers design and administer compensation systems for private and public sector enterprises. Includes motivation theories and practice designing of compensation systems.

**MGMT 401 Management Development and Training** 3c-01-3cr

**Prerequisites:** MGMT 300, 310  
Principles, problems, and procedures in planning, organizing, directing, and controlling all aspects of training and development programs in a business enterprise. Methods of improving and development of managerial skills are emphasized.

**MGMT 402 Seminar in Human Resource Management** 3c-01-3cr

**Prerequisites:** MGMT 300, graduating senior  
An integrative course in human resource management. Considers current issues in human resource management literature and contemporary topics in the human resource management field using case studies.

**MGMT 403 Small Business Planning** 3c-01-3cr

**Prerequisites:** ACCT 300, BTED/COSC/IFMG 101, MGMT 325  
Integrates the content of much of the business core and relates it to the business planning for small businesses and entrepreneurial efforts. Introduces the concepts which support the development of an effective business and marketing plan.

**MGMT 405 Organizational Staffing** 3c-01-3cr

**Prerequisites:** MATH 214, MGMT 300  
Focuses on the "staffing" or "employment" subsystem of the human resource management function and deals with the theoretical, technical, administrative, and legal issues involved in the recruitment, selection, placement, transfer, and promotion of individuals by organizations. Includes human resource planning, job analysis, job descriptions and specifications, recruitment and selection process, equal employment opportunity and affirmative action, reliability and validity of selection instruments and techniques, and contemporary issues in selection.

**MGMT 406 Human Resources Management Research** 3c-01-3cr

**Prerequisites:** MGMT 300, QBUS 215  
The study of the nature of research questions, research methods, research design, collection, analysis, and interpretation of data. Focuses on design, development, implementation, and evaluation of Human Resources Management programs. Applications in employee selection, performance measurement, work attitudes and motivation, employee training, and development areas.

- MGMT 425 Franchising Methods and Management** 3c-01-3cr  
**Prerequisite:** MGMT 275 for nonbusiness majors  
 Covers the principles and activities involved in starting and managing a new franchise from the perspective of the franchiser and franchisee.
- MGMT 428 Seminar in Management** 3c-01-3cr  
**Prerequisite:** MGMT 310  
 An integrative course in management. Considers current literature in the field and contemporary issues in management using case studies.
- MGMT 432 Business and Society** 3c-01-3cr  
 An overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MKTG 432; may not be taken for duplicate credit)
- MGMT 434 Quality Management** 3c-01-3cr  
**Prerequisite:** MATH 214  
 Emphasizes the philosophy that quality is an organizationwide phenomenon that influences every aspect of its operations. An overview of current quality management philosophies and tools and techniques for managing quality in any organization.
- MGMT 437 Supply Chain Management** 3c-01-3cr  
**Prerequisite:** MGMT 330  
 Deals with the design and evaluation of supply chain systems with a focus on strategic and technological issues. These concepts are developed through exploration of contemporary practices, case studies, and research, as well as analytical frameworks of Supply Chain Management. Theoretical and practical understanding of manufacturing and service planning and control, including systems modeling, purchasing and sourcing, logistics, strategic alliances, inventory management, scheduling, etc. Manufacturing and service technologies and trends are also emphasized. Computer applications are used for understanding the interrelationships between various components of Operations System.
- MGMT 438 Seminar in Operations Management** 3c-01-3cr  
**Prerequisites:** MGMT 330, senior standing  
 An integrative course in operations management. Considers and analyzes the current literature and contemporary topics in the area of providing service and producing goods. Case studies and field trips are used to provide a comprehensive knowledge of the theories, current practices, and trends in several topical areas of operations management. Students learn to present their findings and analyses in a professionally written format.
- MGMT 450 Case Studies in Arts Management** 3c-01-3cr  
**Prerequisites:** Minimum of 60cr, MKTG 311 or 320  
 A capstone case analysis course to provide practice in applying business theories to the solution of arts management problems. Utilizing the latest management theories, looks at the practical problems of applying business principles to arts-related businesses and organizations. Through case study analysis, focuses on the everyday problems that managers face and helps students discover solutions.
- MGMT 451 International Management** 3c-01-3cr  
**Prerequisite:** MGMT 310  
 Focuses on the complex role of multinational corporations (MNCs) in today's global economy. Offers an in-depth perspective on planning, organization structure, managerial decision making, and human resource management in global structures and differences between MNCs and domestic organizations. Reviews research in the field, including current issues, trends, and practices.
- MGMT 452 Comparative Management** 3c-01-3cr  
**Prerequisite:** MGMT 310  
 An intensive, comparative study of management and organization across the globe. A variety of comparative management systems, models, and theories are presented, and research findings are examined.
- MGMT 454 International Competitiveness** 3c-31-3cr  
**Prerequisite:** MGMT 310  
 Focuses on how nations and firms seek to improve or sustain their competitive positions in a changing global marketplace. Explores a wide range of contemporary topics such as global economic challenges and trade interdependence, emerging forms of business organizations, and the logic for competing globally. Environments are addressed. Examines various theories, models, and cases dealing with competitive advantage.
- MGMT 459 Seminar in International Management** 3c-01-3cr  
**Prerequisites:** MGMT 310, senior standing  
 An analysis of recent literature and developments related to global business issues such as strategic alliances, human resource management in global environments, global assignments, Japanese business system, and multinational corporations in the world economy.
- MGMT 471 Organizational Launch and New Venture Development** 3c-31-3cr  
**Prerequisite:** MGMT 310  
 Student teams write and present business plans for new ventures. The emphasis of this intensively interactive and uniquely structured course is on applying concepts and techniques studied in various functional areas to the new-venture development environment. In preparing the business plan, students learn to screen for effective venture ideas, identify and define the fundamental issues relevant to the new venture, identify the venture's market niche and define its business strategy, and determine what type of financing should be raised—how, when, by whom, and how much. A solid understanding of business basics is required. Actual business plans are used to address these issues.
- MGMT 472 Organizational Entrepreneurship** 3c-01-3cr  
**Prerequisite:** MGMT 275 or 310  
 Explores the theories related to intrapreneurship and managing innovation and technology. Theory based but practice oriented. Through case discussions, students learn how to apply the analytical tools of strategic management and organizational theory to address important challenges faced by today's managers.
- MGMT 481 Special Topics in Management** var-1-3cr  
 Covers advanced, innovative, or exploratory topics and disciplines within management. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program.
- MGMT 482 Independent Study** var-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
 Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member. Approval based on academic appropriateness and availability of resources.
- MGMT 492 Small Business/Entrepreneurship Internship** var-3-12cr  
**Prerequisites:** MGMT 403, permission of department chairperson, 2.75 cumulative GPA, all other requirements of the Eberly College of Business and Information Technology  
 Involves practical entrepreneurial experience of on-site consulting with small business firms. Students generally work for a semester on functionally related topics in accounting, finance, marketing, and MIS or on general topics such as business planning, forecasting, policy, and general management.
- MGMT 493 Management Internship** var-3-12cr  
 Practical experience to develop knowledge and skills in the application of theory to actual problems in a nonclassroom setting. A maximum of 3cr of internship in the student's major may be applied toward the management and human resource management major area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and dean, Eberly College of Business and Information Technology.

**MGMT 495 Business Policy** 3c-01-3cr  
**Prerequisites:** Completion of all Business Core requirements; graduating seniors

A capstone case analysis course that gives practice in applying business theories to the solution of management problems. An analysis of how top management determines strategy and policy and influences the philosophy and character of the company. Develops a general management viewpoint that integrates the various functions of the organization.

### **MIDL: Middle-Level Education**

#### **Department of Professional Studies in Education College of Education and Educational Technology**

**MIDL 221 Literature for Middle Level** 3c-01-3cr  
**Prerequisite:** Admission into Teacher Education Step 1

Provides a survey of children's literature for middle-level students and examines the role of motivation in developing lifelong readers. Selection and evaluation criteria for each genre, including multicultural literature, are developed and applied. Classroom application and extensions of literature are explored, and current issues in the field of literature for middle-level learners are examined. Appropriate adaptations for resistant readers, students with exceptional needs, and students who are learning English are explored.

**MIDL 222 Reading Instruction and Assessment in Grades 4-8** 3c-01-3cr

**Prerequisite:** Admission into Teacher Education Step 1; MIDL major  
Provides preservice teachers with various strategies, techniques, and materials related to teaching reading in grades 4 through 8. Current research and practical applications will be interwoven to ensure a systematic coverage of the most recent methods and best practice for diverse students in grades 4 through 8.

**MIDL 310 Instructional Theory and Planning for the Middle Level** 3c-01-3cr

**Prerequisite:** Admission into Teacher Education Step 1; MIDL major  
Competencies specific to the art and science of teaching adolescents are introduced with a focus on academic, social, and emotional developmental characteristics of young adolescents as they transition to the middle school. Familiarizes students with the fundamentals of middle-level learning and teaching theory and correspondingly appropriate models of teaching. Planning for instruction will be evidenced through the development of lesson and unit plans which reflect utility in inclusive and diverse settings.

**MIDL 311 Social Studies Instruction and Assessment in Grades 4-8** 3c-01-3cr

**Prerequisite:** Junior status (60cr or more)  
An overview of social studies methods instruction in the middle school classroom. Includes the study of objectives, trends, patterns and principles of organization, and techniques of instruction as it relates to social studies content areas: Geography, Pennsylvania History, United States and World History, Economics, and Civics and Government. Instruction includes assessment strategies for diverse middle school learners in inclusive classroom settings.

**MIDL 312 Science Instruction and Assessment in Grades 4-8** 3c-01-3cr

**Prerequisites:** Admission into Teacher Education Step 1; BIOL 103, GEOS 101/102, SCI 105 all strongly recommended  
Emphasizes science as it relates to middle school students and curriculum, planning for teaching science, and recent innovations in science teaching.

**MIDL 315 Classroom Management and Adolescent Development** 3c-01-3cr

**Prerequisite:** Junior status (60cr or more)  
For MIDL majors to create a professional classroom management plan that supports the healthy development of all young adolescents in a diverse middle school environment. Students discuss, analyze, and apply major concepts, principles, theories, and research related to young adolescent development, including adolescents with special needs and English language learners.

**MIDL 321 Twenty-First-Century Literacies for Diverse Learners** 3c-01-3cr

**Prerequisite:** MIDL 222

Teaches the impact of technology in the field of literacy. Addresses issues and trends related to the use of technology. Includes technology integration in the curriculum and the incorporation of appropriate technologies to support diverse learners.

**MIDL 408 Literacy in the Content Areas** 3c-01-3cr  
**Prerequisite:** MIDL 222

Provides preservice teachers with various strategies, techniques, and materials related to teaching reading and writing in various content areas. Current research and practical applications are interwoven to assist teachers in the development of successful methods for comprehending text in science, social studies, health, English, and mathematics. For undergraduate students as a special elective or as a required course for Middle-Level Education with a specialization in English/Language Arts.

**MIDL 422 Diagnostic and Remedial Reading** 3c-01-3cr  
**Prerequisite:** Teacher Education Step I

Helps educators identify causes of reading disability in middle-level learners. Methods of diagnosis, procedures, and materials for remedial work are discussed. Strategies to improve students' content acquisition are included through both group and individual remediation. For undergraduate students seeking certification for Middle-Level Education with a specialization in English/Language Arts. (Offered as ELED 422 prior to 2011-12)

**MIDL 425 Methods of Teaching Language Arts in Grades 4-8** 3c-01-3cr

**Prerequisite:** MIDL 222 (minimum grade of C)  
Emphasizes the view that the art of communication is an interrelated process, and the task of the middle grades teacher is to integrate the language arts throughout the entire curriculum. Techniques for teaching oral and written communication skills, listening, viewing, and visually representing are presented. Other integral components include spelling instruction to meet the developmental needs of middle-level learners and methods for increasing vocabulary growth. Special emphasis is given to recent trends and research in middle grades education.

### **MKTG: Marketing**

#### **Department of Marketing**

#### **Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**MKTG 311 Arts Marketing** 3c-01-3cr

**Prerequisites:** Junior standing; for nonbusiness majors only

An introduction to modern marketing concepts and applications as they relate to building, maintaining, and developing audiences and clients for performing and visual arts organizations, written arts, and arts market entrepreneurs. Topics include audience/client marketing research and segmentation, public and media-relations strategies, sales and communication functions, pricing issues, Internet-based marketing strategies, database-relationship marketing, and fundraising. Students who have completed or are required to take MKTG 320 should not register for this course.

**MKTG 320 Principles of Marketing** 3c-01-3cr  
**Prerequisite:** ECON 122

A study of those activities necessary to the design, pricing, promotion, and distribution of goods and services for use by organizations and ultimate consumers.

**MKTG 321 Consumer Behavior** 3c-01-3cr  
**Prerequisites:** MKTG 320, PSYC 101

A survey of noteworthy contributions of behavioral science and research on consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

<b>MKTG 350 International Business</b>	<b>3c-01-3cr</b>	Introduces the role and nature of modern personal selling in marketing. Theory and practice of personal selling process, sales planning, delivering sales presentations, and relationship marketing are emphasized. Basics of managing sales force including territory management, recruiting, training, and compensating sales force are also covered.
<b>Prerequisite:</b> MGMT 310		
A study of the international dimensions of business and the critical environmental and organizational factors that affect managerial approaches in the international arena. Focuses upon the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MGMT 350; may not be taken for duplicate credit)		
<b>MKTG 351 Self-Marketing</b>	<b>1c-01-1cr</b>	
<b>Prerequisite:</b> Junior status (as per credits earned)		
Focuses on the development of both long-term and short-term self-marketing plans and self-marketing packages. Theories of managerial marketing, professional selling, market research, and advertising applied to self-marketing in order to prepare students to seek internship experience.		
<b>MKTG 420 Marketing Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MKTG 320, 321, junior standing		
An analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a total marketing program.		
<b>MKTG 421 Marketing Research</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MKTG 320 and MATH 214		
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.		
<b>MKTG 422 Seminar in Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MKTG 420, 421, graduating senior		
A terminal course for majors in marketing; considers current literature in the field, case problems pertaining to the total marketing effort, and current problems of actual companies.		
<b>MKTG 430 International Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
International marketing and markets are analyzed. Special consideration is given to the significance of government regulations, organization structures of export and import enterprises, and credit policies.		
<b>MKTG 431 Business-to-Business Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 420		
Concerned with the major activities involved in the marketing of industrial goods and services, including the industrial marketing system, marketing information needs of the industrial firm, industrial marketing implementation and control, and channel, pricing, product, and promotional strategies for industrial goods.		
<b>MKTG 432 Business and Society</b>	<b>3c-01-3cr</b>	
An overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry. (Also offered as MGMT 432; may not be taken for duplicate credit)		
<b>MKTG 433 Advertising</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
An introduction to the principles, practices, and creations of advertising. Use of various media and legal, economic, social, and ethical aspects of advertising are also considered.		
<b>MKTG 434 Marketing Logistics</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> Junior/senior standing, MKTG 320, 330		
Focuses on planning, organizing, and controlling the marketing logistics function. In addition to the acquisition and application of management science methods, students integrate and apply previously gained knowledge to analyze and solve complex marketing logistics problems. Areas of major concentration include facility location, transportation, inventory management, and customer service.		
<b>MKTG 435 Professional Selling and Sales Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
<b>MKTG 436 Retail Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320 and junior standing		
Introduces students to all facets of retailing, including the history of retailing, retail theories, and decision-making in retailing framework.		
<b>MKTG 437 Services Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Focuses on current theories and applications of marketing techniques in the fast-growing area of services in the business, government, and nonprofit sectors. Emphasizes characteristics of services and their marketing implications and formulation and implementation of marketing strategies for service firms.		
<b>MKTG 438 Relationship Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Relationship marketing entails performing marketing activities directed toward establishing, developing, and maintaining successful long-term relational exchanges. Covers theory and practice of relationship marketing.		
<b>MKTG 439 Internet Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Presents a strategic framework for developing marketing strategies on the Internet. Extends the marketing mix framework to e-commerce using current theories and applications in online product, online pricing, web-based marketing communication, and distribution strategies. Other topics include marketing research on the Internet, electronic retailing, Internet-based customer relationship management, and legal-ethical dimensions of e-marketing. Students use Internet-based, online marketing cases.		
<b>MKTG 440 Direct Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Introduces the role and nature of direct marketing, including its current theory and practice. Topics include current state and growth of direct marketing, prospecting strategies, development of hot lists, timeless strategies, and lifetime value analysis. Discusses strategies, implementation, and public policy issues.		
<b>MKTG 441 Export Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Students conduct an export feasibility analysis of a consumer/industrial item for a foreign market. Focus is on strategic and procedural aspects of export marketing.		
<b>MKTG 442 Social Cause Marketing for Nonprofit Organizations</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320 or instructor permission		
Prepares managers of nonprofit organizations and those whose mission is to plan and implement strategies for social change in society. Topics and activities will focus on strategic and tactical marketing approaches and planning and organizing for effective control of market performance of nonprofit organizations and programs.		
<b>MKTG 443 New Product Design and Branding</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Discusses the new product design, development, branding, and launch process companies use to bring a new concept to market by satisfying customer's unmet needs. Blends the perspectives of marketing and design and the process of product creation. A step-by-step process from product planning and concept generation to commercialization and product launch planning is covered.		
<b>MKTG 444 Green Marketing</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MKTG 320		
Entails a diverse perspective to understanding the impact of human consumption on the environment and development of marketing strategies to improve the human-environment interaction through creation,		

communication, and delivery of superior value and customer relationship management.

**MKTG 445 Social Media Marketing** 3c-01-3cr

**Prerequisite:** MKTG 320 or equivalent

Explores the online marketing activities, practices, and interactions of individuals and organizations using conversational electronic media. Assorted social media interactive networking tools and applications are examined. Students study and develop social media marketing programs.

**MKTG 446 Marketing Ethics** 3c-01-3cr

**Prerequisite:** MKTG 320

Applies major ethical theories to marketing problems, focuses on resolving dilemmas and vested interests of primary and secondary stakeholders, and addresses ethical issues of importance to marketing managers. Various topics cover ethical issues in relation to strategic planning, marketing research, product, pricing, distribution, and promotion decisions. Also discusses issues concerning digital ethical marketing, marketing ethics in global context, and managing and leading ethical marketing systems.

**MKTG 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Covers advanced, innovative, or exploratory topics and disciplines within marketing. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program. Special topics numbered 481 are primarily for upper-level undergraduate students.

**MKTG 482 Independent Study** var-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office. Approval is based on academic appropriateness and availability of resources.

Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

**MKTG 493 Marketing Internship** var-3-12cr

Practical experience in the marketing field to develop knowledge and experience in the practical application of theory to actual problems in a non-classroom situation. A maximum of 3cr of internship in the student's major may be applied toward the marketing major-area elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson and the dean, Eberly College of Business and Information Technology.

**MLSC: Military Science**  
**Department of Military Science**  
**Academic Affairs Division**

**MLSC 101 Introduction to Military Science** 2c-11-2cr

A study of the organization of the United States Army and the role of the military in today's society. Emphasizes the customs and traditions of the service, the Total Army concept, and the fundamentals of leadership. Includes instruction in basic military skills, land navigation, and personal nutrition and fitness. Also, see Leadership Laboratory.

**MLSC 102 Fundamentals of Military Science** 2c-11-2cr

The study of the basic knowledge regarding military service and the profession of arms. Emphasizes basic military skills, first aid, and the development of leadership abilities through practical exercises. Includes instruction on offensive and defensive tactics, the Army writing style, and military briefings. Also, see Leadership Laboratory.

**MLSC 191, 192, 291, 292, 391, 392, 491, 492** 0c-31-1cr  
**Army ROTC Physical Fitness Development I-VIII**

**Prerequisite:** MLSC students only

Principles of individual and group physical fitness through the planning and execution of fitness training for all participating students. Primarily hands-on, performance-oriented training. Students are challenged with scheduling and executing PRT programs that ensure their future soldiers and units are prepared to successfully perform their wartime mission. This curriculum instills effective leadership that is essential to the success of future military leaders.

**MLSC 203 Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics** 2c-11-2cr

Organization, techniques, resources, and capabilities involved in conducting small-unit tactical operations. Emphasizes leadership, organization, and management techniques needed to cause a group of people to accomplish specific objectives. Characteristics of military weapons systems are taught. Students serve as leaders in Leadership Labs.

**MLSC 204 National Security and Fundamentals of Military Topography** 2c-11-2cr

The study of national security concepts, policies, and national decision-making process with emphasis on national resources, national will, and economic factors. Includes a study of nuclear and conventional response options. Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis are covered. Also, see Leadership Laboratory.

**MLSC 305 Fundamentals of Leadership and Modern Learning/Teaching Relationship** 3c-11-3cr

A study in practical application of principles of leadership/management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

**MLSC 306 Study of Advance Leader Planning and Execution of Modern Combat Operations** 3c-11-3cr

An analysis of leader's role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see Leadership Laboratory.

**MLSC 407 Management of the Military Complex to Include Fundamentals of Military and International Law** 3c-11-3cr

The study of the various managerial elements needed to effectively control a military organization and the techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Also, see Leadership Laboratory.

**MLSC 408 Seminar in Military Analysis and Management** 3c-11-3cr

Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations are presented as they relate to military justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

**Leadership Laboratory (one afternoon per week)** var-0cr

A practical experience for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, provides for practical challenges in personal accomplishment, both physical and mental, and for development of team work and leadership.

**Summer Camp** var-0cr

Attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school year. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in amount of one-half pay of second lieutenant per month.

**MUHI: Music History**  
**Department of Music**  
**College of Fine Arts**

**MUHI 101 Introduction to Music** 3c-01-3cr

Presumes no technical background (for nonmajors) but does utilize the varied musical experiences of each individual to help extend interest as far as possible. Attendance at various concerts of university organizations, cultural life events, and visiting artist concerts is required to augment listening experiences of students.

<b>MUHI 102 Music and Literature Survey</b>	<b>3c-01-3cr</b>	Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.
<b>Prerequisite:</b> MUSC major or instructor permission		
Introduces students to a broad spectrum of music and literature of various genres through a careful analysis of poetry, fiction, and drama, both in the original format and in a variety of musical settings. Includes music and literature of various time periods, nationalities, and minorities, including non-western musical traditions. For music majors and others who have a substantial knowledge of music, this course fulfills both the liberal studies fine arts and humanities literature requirements for music education majors.		
<b>MUHI 222 Music of the British Invasion</b>	<b>3c-01-3cr</b>	
Explores the music, personalities, and cultural and historical influences of the so-called "British Invasion" of popular music to America. Covers groups and individual performers from the UK who made an impact on the American popular music scene from 1964 to 1979. Addresses the pre-invasion scene and the long-term effects of the British Invasion.		
<b>MUHI 281 Special Topics</b>	<b>var-1-3cr</b>	
<b>Prerequisite:</b> As appropriate to course content		
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.		
<b>MUHI 301 Music History I</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 102, ENGL 101, 202, HIST 195		
An intensive study of the history and style of Medieval, Renaissance, and Baroque music. Considerable analytical listening required.		
<b>MUHI 302 Music History II</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 102, ENGL 101, 202, HIST 195		
An intensive study of the history and styles of Classical, Romantic, and twentieth-century music to 1950. Considerable analytical listening required.		
<b>MUHI 322 Medieval and Renaissance Music</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
An intensive study of the plainchant foundations in the early Middle Ages; the origins of polyphony; sacred and secular music of the thirteenth to the sixteenth centuries; special emphasis on Dufay, Josquin, Palestrina, and their contemporaries.		
<b>MUHI 323 The Baroque Era</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
Extends from Monteverdi through Bach and Handel and considers vocal and instrumental forms, styles, and practices of era.		
<b>MUHI 324 The Classical Era</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
A survey of music from about 1725 to about 1827, with special attention to the music of Mozart and Haydn. Consideration is given also to the works of D. Scarlatti and C.P.E. Bach.		
<b>MUHI 325 The Romantic Era</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
A survey of music from about 1800 to 1910, with attention directed to the earlier romantic composers such as Beethoven, Schubert, Mendelssohn, and Berlioz through the later romantic composers such as Wagner, Tchaikowsky, Mahler, and Dvorak, as well as others.		
<b>MUHI 420 The Twentieth Century</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
A survey of the stylistic trends of music from 1900 to the present, beginning with Debussy, Ravel, and other impressionists through the music of Schonberg, Stravinsky, Webern, Honegger, and Milhaud. Offered infrequently.		
<b>MUHI 421 American Music</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> MUHI 301, 302		
A study of history and literature of music in America from 1600 to the present day.		
<b>MUHI 481 Special Topics</b>	<b>var-1-3cr</b>	
<b>Prerequisite:</b> As appropriate to course content		
<b>MUHI 482 Independent Study</b>	<b>var-1-3cr</b>	
<b>Prerequisite:</b> Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office		
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.		
<b>MUSC: Music</b>		
<b>Department of Music</b>		
<b>College of Fine Arts</b>		
<b>MUSC 110 Fundamentals of Theory</b>	<b>3c-01-3cr</b>	
Rudiments of materials; harmonic, melodic, rhythmic, and basic formal procedures of the common Practice period including pitch reading, interval construction, scales, and modes.		
<b>MUSC 111 Theory Skills I</b>	<b>0c-31-2cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I.		
<b>MUSC 112 Theory Skills II</b>	<b>0c-31-2cr</b>	
<b>Prerequisite:</b> MUSC 111 with a grade of C or better or Satisfactory		
Continues development of aural skills through dictation, sight-singing, keyboard skills, and improvisation. Taken in conjunction with Theory II.		
<b>MUSC 115 Theory I</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through seventh chords.		
<b>MUSC 116 Theory II</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> MUSC 115, with a grade of C or better or Satisfactory		
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants. Introduces basic music forms.		
<b>MUSC 120 Brass Ensemble</b>	<b>0c-21-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
Provides a chamber ensemble experience for brass performers.		
<b>MUSC 121 Chamber Singers</b>	<b>0c-31-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
Performs a broad spectrum from early Gregorian chant to contemporary rock cantatas.		
<b>MUSC 122 University Chorale</b>	<b>0c-31-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
Studies and performs masterworks from the choral literature.		
<b>MUSC 123 Symphony Band</b>	<b>0c-31-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
Provides a large ensemble experience for woodwind, brass, and percussion performers.		
<b>MUSC 124 Concert Band</b>	<b>0c-31-0/1cr</b>	
Provides a large ensemble experience for woodwind, brass, and percussion performers.		
<b>MUSC 125 Marching Band</b>	<b>0c-61-0/1cr</b>	
<b>MUSC 126 Music Theater</b>	<b>0c-61-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		
The study and performance of a wide variety of musical theatre venues from opera to Broadway.		
<b>MUSC 127 Percussion Ensemble</b>	<b>0c-41-0/1cr</b>	
<b>Prerequisite:</b> MUSC major or instructor permission		

Performs pieces ranging from traditional to contemporary, novelty to transcriptions, and marimba ensembles to world music.

**MUSC 128 Opera/Musical in Production Ensemble** 0c-3l-0/1cr

**Prerequisites:** Successful audition and instructor permission

An opportunity with academic credit to make significant contributions to campus opera and musical theater productions, augmenting music coursework in the areas of musical training and performance experience for the singer-actor and the pit orchestra musician. Coursework consists of rehearsal and performance of a full-length mainstage opera or musical, culminating in four to eight public performances. Singers in the production ensemble learn performance techniques, characterization skill, and physical coordination and freedom of movement on stage. Instrumentalists in the pit orchestra learn performance and ensemble techniques, including challenging reading skills and the ability to interpret a wide variety of musical styles. This is a repeatable course which meets Music Department ensemble requirements.

**MUSC 129 University Symphony Orchestra** 0c-5l-0/1cr

**Prerequisite:** MUSC major or instructor permission

Provides experience performing standard orchestral repertoire as well as new and unusual works for orchestra.

**MUSC 130 String Ensemble** 0c-2l-0/1cr

**Prerequisite:** MUSC major or instructor permission

Provides string players an experience with music from Baroque works of Vivaldi, Handel, and Bach to the new and experimental.

**MUSC 131 University Wind Ensemble** 0c-3l-0/1cr

**Prerequisite:** MUSC major or instructor permission

Provides a large ensemble experience for woodwind, brass, and percussion performers.

**MUSC 132 Men's or Women's Chorus** 0c-3l-0/1cr

**MUSC 133 Woodwind Ensemble** 0c-2l-0/1cr

**Prerequisite:** MUSC major or instructor permission

Provides a chamber ensemble experience for woodwind performers.

**MUSC 134 University Chorus** 0c-3l-0/1cr

**Prerequisite:** MUSC major or instructor permission

A large, mixed chorus that performs major works each semester.

**MUSC 135 Jazz Ensemble** 0c-3l-0/1cr

**Prerequisite:** MUSC major or instructor permission

The study and performance of all styles of jazz including swing, Latin, rock fusion, and other contemporary idioms.

**MUSC 136 Advanced Jazz Ensemble** 0c-3l-0/1cr

**Prerequisite:** MUSC major or instructor permission

Performs a mixture of jazz styles from Latin to swing, ballads to fusion.

**MUSC 137 Piano Accompanying** var-1-1 or 0cr

Piano accompanying may be scheduled by qualified (successful audition) pianists from the Music Department in partial fulfillment of ensemble requirements. May be repeated for credit. Pianists registered for this course will provide accompaniments for Music Department students in solo vocal or instrumental performances in area and departmental recitals and/or in voice and instrumental lessons. Registration must be approved by a designated Music Department faculty member from the piano area.

**MUSC 151 Class Voice I** 1c-1l-1cr

For non-Voice and Music Education majors. Development of correct vocal production techniques through individual and group performance in class. Use of the voice as a tool for theory skills and for eventual use in the music classroom.

**MUSC 152 Class Voice II** 1c-1l-1cr

A continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.

**MUSC 153 Class Piano I** 1c-1l-1cr

**Prerequisite:** MUSC major or instructor permission

For MUSC majors with no significant background in piano who need to develop functional keyboard skills. Emphasizes scales, chord progressions,

and sight-reading. Harmonizing melodies and playing simple accompaniments are included in this skill-oriented course.

**MUSC 154 Class Piano II** 1c-1l-1cr

A continuation of Class Piano I; for MUSC majors.

**MUSC 155 Class Strings I** 1c-1l-1cr

For Music Education majors who will develop rudimentary playing techniques sufficient to initiate instruction for beginning students. Emphasizes correct playing positions and tone production for violin, viola, cello, and double bass.

**MUSC 157 Class Percussion I** 1c-1l-1cr

A practical introduction to the various instruments of the percussion family. Students demonstrate correct playing techniques and develop a resource file containing information on percussion instruments and instructional materials as needed by the school music teacher.

**MUSC 159 Class Brass I** 1c-1l-1cr

For Music Education majors who will demonstrate rudimentary playing techniques and tone production skills to initiate beginning instruction. Students develop playing on trumpet or French horn and trombone, euphonium, or tuba.

**MUSC 161 Class Woodwinds I** 1c-1l-1cr

For Music Education majors who will acquire correct tone production and playing techniques sufficient to initiate beginning instruction. Students demonstrate skills with flute, clarinet, saxophone, and oboe or bassoon.

**MUSC 163 Class Guitar I** 1c-1l-1cr

For students with no significant background in guitar who wish to develop functional playing skills. Emphasizes using the guitar as an accompanying instrument.

**MUSC 180 Technology for General Musicianship** 2c-1l-2cr

**Prerequisites:** MUSC major enrolled in B.A. or B.F.A. program or instructor permission

An introduction to the fundamental concepts of music technology, including the basics of digital audio sound recording, music notation, MIDI, mixing and sound synthesis, and the construction and use of web pages in a music career.

**MUSC 211 Theory Skills III** 0c-3l-2cr

**Prerequisite:** MUSC 112 with a grade of C or better or Satisfactory

Further development of aural skills through dictation, sight singing, keyboard skills, and improvisation. Taken in conjunction with Theory III.

**MUSC 212 Theory Skills IV** 0c-3l-2cr

**Prerequisites:** MUSC 211 and 154 or APMU 151, with a grade of C or better or Satisfactory

Culmination of the development of aural and keyboard skills including sight-reading, performance, and improvisation. Taken in conjunction with Theory IV.

**MUSC 215 Theory III** 3c-0l-3cr

**Prerequisites:** MUSC 115, 116, with a grade of C or better or Satisfactory

An extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures.

**MUSC 216 Theory IV** 3c-0l-3cr

**Prerequisites:** MUSC 115, 116, 215, with a grade of C or better or Satisfactory

An extension of the techniques of the eighteenth and nineteenth centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures. Theory IV concentrates largely on music and materials of the present century.

**MUSC 217 Keyboard Harmony** 3c-0l-3cr

**Prerequisites:** MUSC 212, 216, and the equivalent of a "B" Jury, or instructor permission

A keyboard approach to understanding harmony observed during the common practice period. Study through the weekly performance and realization of various exercises includes figured bass, score reading (works for small and



large orchestra), playing by ear, and applied theoretical analysis. Projects include creating a reduced, four-part score from one movement of a large orchestral work and a transcription of one movement from a large orchestral work.

**MUSC 224 Jazz Improvisation Techniques I** 1c-.5l-1cr  
A study of the basic materials and practices for improvising or extemporaneous playing.

**MUSC 225 Jazz Improvisation Techniques II** 1c-0.5l-1cr  
**Prerequisite:** MUSC 224 or permission  
A continuation of the basic materials and practices for improvising or extemporaneous playing. Makes use of more complicated and involved harmonic progressions utilizing extended chordal harmonies.

**MUSC 240 Technology in the Music Classroom** 2c-1l-2cr  
Introduces the technology resources available for use in the music classroom and the instructional technologies appropriate for application in K-12 settings including applications for students with disabilities. Students are exposed to a variety of media and have the opportunity to gain familiarity in their use. Emphasizes the use of the computer in the music classroom, web-based technologies, and music software.

**MUSC 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**MUSC 300 Black Music in America and Diaspora** 3c-0l-3cr  
A survey of the body (roots) of music known as "black music" through a topical examination of selected styles, genres, and musicians. Through lecture, reading, discussion, videography, and discography, its historical, sociopolitical, philosophical, religious influences, and musical developments will also be explored. Examines the origins of African music as well as music created in cultures of the Black Diaspora.

**MUSC 304 Form and Analysis I** 2c-0l-2cr  
**Prerequisite:** MUSC 216  
A thorough study of smaller forms of music.

**MUSC 311 Fundamentals of Conducting** 3c-0l-2cr  
**Prerequisite:** MUSC major or instructor permission  
Emphasizes fundamental physical skills of conducting process; various beat patterns are mastered and elementary score reading and interpretation are considered.

**MUSC 312 Choral Conducting** 3c-0l-2cr  
**Prerequisite:** MUSC 311  
An opportunity to apply basic conducting techniques to choral music. Each student conducts the class in standard choral works. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

**MUSC 313 Instrumental Conducting** 3c-0l-2cr  
**Prerequisite:** MUSC 311  
An opportunity to apply basic conducting skills to various instrumental ensembles. Includes a survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

**MUSC 315 Theory V** 3c-0l-3cr  
**Prerequisite:** MUSC 216  
Many harmonic idioms of past half-century are considered, such as comparative analysis of dissonance; polytonality, polyrhythms; atonalism and 12-tone system; and microtonalism. Original writing in these styles required.

**MUSC 331 Elementary Methods** 2c-1l-2cr  
**Prerequisite:** MUSC 212  
Familiarizes students with contemporary music education methods for the elementary general music classroom. Includes teaching and learning strat-

egies for developing singing, moving, listening, creating, and playing classroom percussion, recorders, and guitar. Specific focus on child development, characteristics of special learners, curriculum planning, and diverse musical materials. Includes three classroom observations in the field.

**MUSC 333 Instrumental Methods** 2c-1l-2cr  
**Prerequisite:** MUSC 212  
Familiarizes students with the instrumental music teaching process including traditional and innovative methodology; development of beliefs and values; communication, motivation, and reinforcement; curriculum development, planning, modeling, sequencing, and assessment; recruiting and retention; teaching techniques for rehearsals for the art of lesson giving and for confronting the main issues of rhythm and intonation; development of aural/visual discrimination skills; improvisation; aptitude tests and testing; classroom control; literature; and equipment.

**MUSC 335 Music for Students with Disabilities in Inclusive Settings** 1c-1l-1cr  
**Prerequisite:** Admission to teacher certification  
**Corequisite:** EDUC 242 Section 52  
Develops music education skills, techniques, and materials for students with disabilities and special needs within the music classroom setting. Legal rights of students with special needs are stressed with regard to opportunities to participate in music activities and ensembles. Must be elected concurrently with EDUC 242. Includes field experiences in the music classroom during the EDUC 242 observation period.

**MUSC 337 General/Choral Methods** 2c-1l-2cr  
**Prerequisites:** MUSC 111, 112, 211, 212  
A pedagogical overview of music methods related to general and choral music curricula for the middle school, junior high school, and high school. Emphasizes the complex factors of adolescent behavior and physiology, administrative issues, performance expectations, and conceptually based learning which influence music teaching at this level.

**MUSC 340 Woodwind Instrument Repair** 0c-2l-2cr  
**Prerequisites:** MUSC 133, teacher certification  
For students preparing for teaching careers in instrumental music. Instruction is conducted in a laboratory setting and includes development of the diagnostic and repair skills necessary to deal with the problems most frequently encountered in a public school classroom on the clarinet, flute, and saxophone.

**MUSC 351 Italian Diction and Literature** 1c-1l-1cr  
A laboratory course in Italian diction for first-semester voice majors. Meets for two hours per week. Emphasizes pronunciation for the stage and the International Phonetic Alphabet. Students demonstrate skills by singing Italian solo song literature and operatic repertoire of the seventeenth and eighteenth centuries.

**MUSC 353 French Diction and Literature** 1c-1l-1cr  
A laboratory course in French diction for third- or fourth-semester voice majors. Meets for two hours per week. Emphasizes pronunciation for the stage and the International Phonetic Alphabet. Students demonstrate skills by singing French solo song literature and operatic repertoire.

**MUSC 354 German Diction and Literature** 1c-1l-1cr  
A laboratory course in German diction for second-semester voice majors. Meets for two hours per week. Emphasizes pronunciation for the stage and the International Phonetic Alphabet. Students demonstrate skills by singing German solo and song literature and operatic repertoire.

**MUSC 403 Practicum in String Pedagogy** 1c-0l-0-1cr  
**Prerequisites:** FBI, Act 34, and Act 151 clearances, instructor permission  
Practical applications of string methods and string pedagogy techniques for instruction in hands-on teaching experiences in individual and ensemble settings. The emphasis is on sequential instruction and reflective assessment of teaching techniques and goals.

**MUSC 404 String Pedagogy** 2c-0l-2cr  
**Prerequisite:** Instructor permission  
The study of specific techniques of and pedagogical approaches for violin, viola, cello, and double bass in both individual and class situations.

<b>MUSC 405 Piano Pedagogy</b>	<b>3c-01-3cr</b>	<b>MUSC 482 Independent Study</b>	<b>var-1-6cr</b>
<b>Prerequisites:</b> Junior standing in Piano and a Piano major or minor		<b>Prerequisite:</b> Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office	
A survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.		Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.	
<b>MUSC 406 Voice Pedagogy</b>	<b>3c-01-3cr</b>	<b>MUSC 493 Internship in Music</b>	<b>var-1-6cr</b>
<b>Prerequisites:</b> A voice major or minor and instructor permission		For MUSC majors who wish to receive practical experience working with people in music or in areas related to music.	
A survey of current and past development in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.			
<b>MUSC 408 Marching Band Techniques</b>	<b>2c-01-2cr</b>	<b>NMDT: Nuclear Medicine Technology</b> <b>Department of Nursing and Allied Health Professions</b> <b>College of Health and Human Services</b>	
Considers building a band show; alignment of ranks and files; development of a standard pace of 5 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and fundamentals of uniform design.		<b>NMDT 427 Nuclear Scintigraphy</b>	<b>3c-01-3cr</b>
<b>MUSC 411 Composition I</b>	<b>2c-01-2cr</b>	<b>Prerequisite:</b> MUSC 216	
Instruction is individualized. Compositional devices studied through analysis of works by major composers. Students write several original compositions utilizing smaller forms.		Theoretical aspects of nuclear medicine imaging procedures, including applicable pathophysiology, technical aspects for data acquisition, and computer analysis of data. Systemic radionuclide therapy procedures are also discussed.	
<b>MUSC 412 Composition II</b>	<b>2c-01-2cr</b>	<b>NMDT 428 Radiation Physics</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> MUSC 411		Applicable aspects of nuclear and atomic physics are covered both in theory and mathematical formulae. Theoretical topics include atomic and nuclear structure, radioactive decay, interactions with matter, and radionuclide production methods. Mathematical concepts discussed are the decay equation, equilibrium, and radiation dosimetry.	
A continuation of Composition I.		<b>NMDT 429 Nuclear Medicine Instrumentation</b>	<b>2c-11-3cr</b>
<b>MUSC 413 Composition III</b>	<b>2c-01-2cr</b>	<b>Prerequisite:</b> MUSC 412	
Students write several original compositions utilizing larger forms.		Covers the basic principles of both in vitro and in vivo instrumentation. Also covers the design, operation, and quality control of gas detectors and scintillation detectors. Survey equipment, spectrometers, and stationary imaging devices are presented with their application to nuclear medicine. Includes hands-on laboratory experience with single channel analyzers and Anger cameras.	
<b>MUSC 414 Composition IV</b>	<b>2c-01-2cr</b>	<b>NMDT 430 Radiation Biology and Radiation Protection</b>	<b>2c-01-2cr</b>
<b>Prerequisite:</b> MUSC 413		Topics include ionization and energy transfer; molecules, cellular, tissue, and organ response to radiation; acute and chronic effects of radiation; radiation protection; licensing requirements; recordkeeping; and management of clinical radiation spills.	
A continuation of Composition III. Outstanding works are programmed by university performing ensembles.		<b>NMDT 431 In Vivo/In Vitro NonImaging</b>	<b>1c-01-1cr</b>
<b>MUSC 415 Counterpoint I</b>	<b>3c-01-3cr</b>	<b>Prerequisite:</b> MUSC 216	
A study of the contrapuntal style of J.S. Bach and his contemporaries in the late Baroque era, which includes learning the essence of the "species" counterpoint of J. J. Fux and applying it to written exercises based on a given <i>cantus firmus</i> , as well as original compositions in the style of Bach. In addition to close study of Bach's <i>Two-Part Inventions</i> and of the fugues from the <i>Well-Tempered Clavier</i> , students hear and discuss their exercises and compositions in class so that they may learn from one another. (Offered as MUSC 306 prior to 2011-12)		In vivo clinical nuclear medicine procedures not resulting in images as well as principles of in vitro radioassay are presented. Included are venipuncture, blood volumes, red cell studies, Schillings test, principles of immunology, various types of radioassay, and sensitivity and specificity of procedure.	
<b>MUSC 417 Orchestration</b>	<b>3c-01-3cr</b>	<b>NMDT 432 Radiopharmaceuticals</b>	<b>3c-01-3cr</b>
<b>Prerequisite:</b> MUSC 216		Topics include tracer theory, pharmacological actions, localization methods, radiopharmaceutical properties, radionuclide generators, radiopharmaceutical preparations and quality control, and transient vs. secular equilibrium. Routinely used radiopharmaceuticals are discussed.	
All instruments of orchestra are studied from the viewpoint of their contribution to the total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music. (Offered as MUSC 309 prior to 2011-12)		<b>NMDT 433 Introduction to Tomographic Imaging</b>	<b>1c-01-1cr</b>
<b>MUSC 418 Form and Analysis I</b>	<b>3c-01-3cr</b>	<b>Prerequisite:</b> MUSC 216	
Thoroughly explores the various forms of Western music through in-depth analyses of representative examples by master composers from Baroque through twentieth century. Many genres will be introduced, with a special emphasis on string quartet literature. (Offered as MUSC 304 prior to 2011-12)		An introduction to the basic principles of cross-sectional anatomy and tomographic imaging is presented. Topics include body planes and cross-sectional anatomy of the heart, brain, liver, and lumbar spine, as applicable to nuclear medicine, and the theory and application of both SPECT and PET imaging systems.	
<b>MUSC 475 Music Lab</b>	<b>var-0cr</b>	<b>NMDT 434 Clinical Nuclear Medicine</b>	<b>0c-401-16cr</b>
All music majors must attend eight on-campus (unless preapproved) recitals and meetings per semester and all departmental recitals, as well as all recitals for their respective performance areas.		<b>Prerequisites:</b> Completion of 77cr at IUP and Phase I at NMI	
<b>MUSC 481 Special Topics</b>	<b>3c-01-3cr</b>	Complete 1,320 hours of supervised clinical training at an affiliate hospital. Gives instruction and participates in the performance of various clinical nuclear medicine procedures, patient care, administrative duties, radiopharmaceutical preparation and quality control, equipment quality control, quality assurance, and radiation safety. Develops both technical skills and interpersonal communication skills for incorporation into the medical community and to provide high-quality patient care. Offered on a pass/fail basis only.	
<b>Prerequisite:</b> As appropriate to course content			
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter changes with repeated offering of the course. May be repeated for credit.			

**NMTT: Nanomanufacturing Technology**  
**Department of Physics**  
**College of Natural Sciences and Mathematics**

**NMTT 311 Materials, Safety, and Equipment Overview for Nanofabrication** 3c-2l-3cr

**Corequisite:** NMTT 312

Focuses on cleanroom protocol and provides an overview of the materials, safety, and equipment issues encountered in the practice of “top down” and “bottom up” nanofabrication.

**NMTT 312 Basic Nanofabrication Processes** 3c-2l-3cr

**Corequisite:** NMTT 311

A hands-on introduction to the processing sequences involved in “top down,” “bottom up,” and hybrid nanofabrication. Focuses on a step-by-step description of the processes integration needed to fabricate devices and structures.

**NMTT 313 Thin Films in Nanofabrication** 3c-2l-3cr

**Corequisites:** NMTT 311 and 312

Provides a detailed understanding of the use and processing of thin film materials in nanofabrication. Emphasizes the understanding and operation of the state-of-the-art deposition and etching processing equipment in the PSU Nanofabrication Facility cleanrooms.

**NMTT 314 Lithography and Patterning Techniques** 3c-2l-3cr

**Corequisite:** NMTT 311

Provides knowledge and hands-on treatment to all aspects of advanced lithography and pattern generation processes, covering topics from substrate preparation to exposure using pattern transfer equipment such as stamping and embossing, ion and e-beam, and optical contact and stepper.

**NMTT 315 Materials Modifications in Nanofabrication** 3c-2l-3cr

**Corequisite:** NMTT 311

Provides detailed knowledge of the processing steps used in modifying material properties in nanofabrication, including molecular functionalization, cross-linking, metal silicidation, material oxidation, material nitridation, barrier materials, alloying, stress control, annealing, and doping.

**NMTT 316 Characterization, Packaging, and Testing of Nanofabrication Structures** 3c-2l-3cr

**Corequisite:** NMTT 311

Addresses the issues and examines a variety of techniques and measurements essential for testing and controlling the final device fabrication, performance, and packaging.

**NURS: Nursing**  
**Department of Nursing and Allied Health Professions**  
**College of Health and Human Services**

**NURS 101 Disaster Awareness** 1c-0l-1cr

Provides a basic understanding of the essentials of disaster planning, responding to mass casualty incidents, and postdisaster restoration of basic public health. Introduces a basic overview of health issues caused by biological, chemical, explosive, and natural disasters.

**NURS 143 Healthy People** 3c-0l-3cr

Advances knowledge of health promotion and illness prevention concepts and examines health disparities across segments of the population. The determinants of health, health status assessment, and the nation’s leading health indicators are emphasized. Students are guided in the development of a personal wellness program. Successful completion of NURS 143 fulfills the Liberal Studies Health and Wellness requirement. HPED/FDNT 143 also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**NURS 202 Foundations of Child Health** 3c-0l-3cr

Focuses on conditions that affect the health of children. Provides an overview of the structure and function of selected body systems. Emphasizes the development of each system during infancy and childhood. The impact of

common acute and chronic diseases on children is incorporated. Health promotion concepts are addressed.

**NURS 211 Nursing Practice I** 0c-3l-1cr

**Prerequisite:** Sophomore standing

**Prerequisites or Corequisites:** BIOL 105, 150 or 151

The first of two clinical courses that present the concepts and abilities fundamental to the practice of professional nursing and provide a foundation on which students can build their professional knowledge base as well as their interpersonal and psychomotor skills. Clinical assignments in a variety of settings provide opportunities for students to develop basic clinical practice skills.

**NURS 212 Professional Nursing I** 2c-0l-2cr

**Prerequisite:** Sophomore standing

Introduces students to the discipline of nursing and values that are fundamental to practice. Caring, as a concept central to the practice of professional nursing, will provide the framework for examining the values of the profession. Human diversity and the effects that culture, socioeconomics, ethnicity, and religion have on health status and response to health care are studied. An overview of the healthcare system in the U.S. and an examination of access issues. As a foundation for client contact in subsequent courses, students learn therapeutic communication skills and theory related to teaching and learning. Team building experiences are an integral component.

**NURS 213 Nursing Practice II** 0c-3l-1cr

**Prerequisites:** NURS 211, 212

**Corequisites:** NURS 214, 236

Builds on Nursing Practice I and provides opportunities to continue to build professional knowledge and skills with diverse individuals and families in a variety of settings. Emphasizes developing ability to perform health assessments, using therapeutic communication, and executing basic nursing skills while promoting healthy behaviors.

**NURS 214 Health Assessment** 2c-0l-2cr

**Prerequisites:** BIOL 150 or 151, NURS 211, or permission

**Prerequisite or Corequisite:** BIOL 150 or 151

**Corequisite:** NURS 213, 236, or permission

Introduces basic health assessment, which is a systematic method of data collection, organization, and validation for the purpose of determining a client’s health status. Involves assessment of clients across the life span. Emphasizes assessment of client needs that affect the total person, which is consistent with nursing’s holistic approach to client care. Methods of data collection used for health assessments include observing, interviewing, and examination. Students learn to apply these methods effectively in order to gather accurate and complete assessments.

**NURS 236 Foundations of Nursing** 3c-0l-3cr

**Prerequisites:** CHEM 102, NURS 212

**Corequisites:** NURS 213, 214

Introduces fundamental nursing concepts that apply to the practice of professional nursing with individuals. Topics include nursing theories related to professional practice, elements of holistic care, promotion of psychosocial and physiologic health, and application of pharmacology in nursing practice.

**NURS 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**NURS 306 Problem Solving in Nursing** 3c-0l-3cr

Provides opportunities to recognize and develop intervention strategies for problem solving in clinical nursing situations. Emphasizes developing application and analysis skills required for success in the nursing program.

**NURS 312 Professional Nursing II** 2c-0l-2cr

**Prerequisites:** NURS 212 or permission

**Corequisites:** NURS 337 or 331 and 333 or permission

Provides the nursing major with a working knowledge of the values, code of ethics, ethical principles, professional standards, and legal framework that govern clinical decisions, determine professional conduct, and guide interactions with clients, families, colleagues, and other health care providers. Students formulate an ethical decision-making framework that, by incorporating personal values, professional values, moral concepts, and legal mandates, serves as a guide to professional practice. Using a problem-based approach, students study legal and ethical frameworks that guide professional practice and relate/apply these to actual clinical situations.

**NURS 316 Research Utilization in Nursing** 3c-01-3cr  
**Prerequisite:** NURS 236 or permission

**Prerequisites or Corequisites:** ENGL 202, MATH 217  
Focuses on understanding and critiquing nursing research. Emphasizes understanding the research process and applying research findings to practice. Students describe the various stages of the research process and apply these steps to evaluate clinical nursing research problems. Focuses on developing the necessary skills to engage in scholarly research writing.

**NURS 330 Care of the Child** 2c-01-2cr  
**Prerequisites:** FDNT 212, NURS 236, PSYC 310, or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 331

Focuses on knowledge essential in providing nursing care for the child with an alteration in health. Includes an emphasis on the care of the child with structural or physiological dysfunction, specific acute illness, and chronic conditions.

**NURS 331 Care of the Child Clinical** 0c-7.5I-2.5cr  
**Prerequisites:** FDNT 212, NURS 236, PSYC 310 or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 330

Provides opportunities to students in providing health promotion, disease prevention, and participation in the care of children. Experiences may include a variety of ambulatory, community, and acute care settings to enable the student to develop knowledge and skills essential with nursing care of children and their families. Focuses on the well-child, recognizing the unique issues of each developmental stage. Integrated throughout will be the nurse's role in health promotion and identification through assessment of normal and deviations of normal findings. Utilizes the nursing process in the delivery of care in multiple clinical settings and develops teaching and psychomotor skills that are unique to child and family. Recognition of cultural needs and community resources available to children will be emphasized. The importance of professionalism, communication, and adherence to professional nursing standards will be threaded through all course content.

**NURS 332 Maternal-Neonatal Health** 2c-01-2cr  
**Prerequisites:** FDNT 212, NURS 236, PSYC 310 or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 333

Focuses on knowledge essential to provide competent primary and secondary level of nursing care for pregnant women and their neonates within a family context. Emphasizes contemporary issues experienced by childbearing women and their families.

**NURS 333 Maternal-Neonatal Health Clinical** 0c-7.5I-2.5cr  
**Prerequisites:** FDNT 212, NURS 236, PSYC 310 or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 332

Provides clinical learning experiences that enables students to administer primary and secondary nursing care for mothers, neonates, and their families. These experiences are planned in a variety of settings to facilitate student development of core values, knowledge, competencies, and skills associated with nursing care of mothers, children, and their families.

**NURS 334 Transitions in Professional Nursing** 3c-01-3cr  
**Prerequisite or Corequisite:** ENGL 202  
**Corequisite:** Licensed Practical Nurse or Registered Nurse  
Explores the dynamic nature of health and its impact on the practice of nursing. Nursing theories, concepts, and issues related to nursing practice are analyzed. Linkages among theory, research, and practice are explored for relevance and utility. (Writing-intensive course)

**NURS 336 Adult Health I** 4c-01-4cr  
**Prerequisites:** FDNT 212, NURS 236, or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 337

Introduces disease processes and treatment regimens and examines their impact on adults throughout their life span. Emphasizes increasing student knowledge about assessing human responses to changes in health, determining appropriate nursing interventions, and identifying the physiological and psychosocial basis for nursing actions.

**NURS 337 Adult Health Clinical I** 0c-15I-5cr  
**Prerequisites:** FDNT 212, NURS 236, or permission  
**Prerequisite or Corequisite:** NURS 316  
**Corequisite:** NURS 336

Provides opportunities to apply the nursing process with adults and aging families in a variety of settings. Emphasizes increasing the student's ability to perform comprehensive health assessments and to use assessment data to identify problems and to intervene and evaluate care. Students function as members of the health care team, identify discharge-planning needs, and differentiate between collaborative and independent nursing activities.

**NURS 340 Nursing Pharmacology** 3c-01-3cr  
**Prerequisite:** NURS 236 or permission

Provides the nursing student with a pathophysiological approach to the therapeutic use of medications. Explores relationships between pharmacology and pathophysiology. Emphasizes understanding prescribed pharmacotherapy, therapeutic goals, nursing assessment and interventions, and patient well-being related to the effects of specific diseases or conditions.

**NURS 407 Skills for Professional Success** 1c-01-1cr  
**Prerequisite:** Must be enrolled in senior-level nursing courses

A 1cr elective for senior nursing majors designed to help foster clinical judgment skills by focusing on critical thinking and test-taking. Emphasizes preparing students with the skills that are essential for success on the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

**NURS 411 Advanced Health Assessment** 2c-3I-3cr  
**Prerequisites:** Registered Nurse or permission

This clinical course builds upon the basic assessment techniques of the registered nurse. Provides the student with the ability to assess the health status of adults. Enables the student to collect a comprehensive health history and perform complete physical examination on adults from various backgrounds. Focuses on examination techniques and identification of deviations from normal.

**NURS 412 Professional Nursing III** 2c-01-2cr  
**Prerequisites:** NURS 312, 337, 331, 333 or permission  
**Corequisites:** NURS 432, 434 and 431, 433 or 436 and 437, or permission

The professional nurse is expected to use clinical, managerial, and personal leadership skills to ensure the delivery of high-quality, cost-effective care in divergent health care delivery systems. The study of leadership and management skills and processes are approached as inherent elements for all levels of nursing practice. The role of designer/manager/coordinator of care in professional nursing is examined in depth.

**NURS 431 Community Health Clinical** 0c-7.5I-2.5cr  
**Prerequisites:** NURS 336, 337, 330, 331, 332, and 333 or permission  
**Prerequisites or Corequisites:** NURS 412, 434

Focuses on community-based and community health nursing experiences to enable students to provide primary, secondary, and tertiary interventions in community settings and with diverse populations in the surrounding communities. Emphases are also on nursing management and development of nursing strategies to assist at-risk individuals, families, and client groups, while considering health care on a continuum throughout the lifespan. Opportunities exist for individual mentoring in clinical areas such as maternal-child, gerontology, palliative, end-of-life, and/or home health care as an integral part of the course.

**NURS 432 Psychiatric/Mental Health** 2c-01-2cr  
**Prerequisites:** NURS 330, 331, 332, 333, 336, 337 or permission  
**Prerequisites or Corequisites:** NURS 412 and 433 or permission

Focuses on the principles and concepts that guide nursing practice in a variety of psychiatric/mental health settings. The role of the nurse in primary, secondary, and tertiary prevention/intervention is addressed as it relates to individuals, families, and aggregates.

**NURS 433 Psychiatric/Mental Health Clinical 0c-7.5I-2.5cr**

**Prerequisites:** NURS 330, 331, 332, 333, 336, 337 or permission

**Prerequisites or Corequisites:** NURS 412, 432

Focuses on experiences within psychiatric-based facilities and working as members of a multidisciplinary team to provide primary, secondary, and tertiary prevention/intervention. Emphases are also on nursing management and development of nursing strategies to assist at-risk families and client groups, while considering health care on a continuum throughout the lifespan.

**NURS 434 Community Health 2c-0I-2cr**

**Prerequisites:** NURS 336, 337, 330, 331, 332, and 333 or permission

**Prerequisites or Corequisites:** NURS 412 and 431 or permission

Focuses on nursing care that is population and community oriented. Emphasizes the community as a client, perspectives and influences of the health care delivery systems, theoretical frameworks applicable to community health, contemporary issues in community health nursing, and nursing roles as designers, managers, and coordinators of care in the community.

**NURS 436 Adult Health II 4c-0I-4cr**

**Prerequisites:** NURS 336, 337, 330, 331, 332, 333 or permission

**Prerequisite or Corequisite:** NURS 412

**Corequisite:** NURS 437

Builds on Adult Health I; focusing on the adult/family coping with complex health problems. The relationships among disease states, treatment, and associated nursing responsibilities are emphasized as students build their knowledge base of pharmacology, therapeutic procedures, rehabilitation needs, and teaching-learning strategies. Principles underlying the use of technology in clinical practice provide a basis for the concurrent clinical course.

**NURS 437 Adult Health Clinical II 0c-15I-5cr**

**Prerequisites:** NURS 336, 337, 330, 331, 332, 333 or permission

**Prerequisite or Corequisite:** NURS 412

**Corequisite:** NURS 436

Provides opportunities for clinical practice as a provider of care for complex, acutely ill clients in a variety of settings including intensive care unit, monitored units, medical-surgical units, and rehabilitation settings. Focuses on secondary prevention/intervention for long-term critically ill patients. Emphasizes the role of designer/manager/coordinator of care with opportunities to apply management principles and practice leadership skills in the acute care and rehabilitation setting. Opportunities for students to receive precepting with a registered nurse are an integral component.

**NURS 450 A Cognitive Approach to Clinical Problem Solving 3c-0I-3cr**

**Prerequisites or Corequisites:** NURS 431, 433, or 437

Focuses on advanced clinical problem-solving and decision-making skills needed by professional nurses. Examines factors that influence clinical problem solving to facilitate higher-level thinking in simulated clinical situations.

**NURS 454 Health Promotion of Families Across the Lifespan 3c-0I-3cr**

**Prerequisite:** NURS 334

The first part focuses on the underlying theories and frameworks for family structure, function, and assessment. The second part focuses on application and evaluation of families in the context of health promotion. The family is studied across the life span. Emphasizes family assessment and cultural diversity and the stressors that impact families during the various stages of life. Required to conduct a family assessment in the community.

**NURS 455 Introduction to Nursing Informatics 3c-0I-3cr**

**Prerequisite:** Registered Nurse or instructor permission

An introduction and overview in the application of the disciplines of nursing science, computer science, and information science in collecting, processing, and managing information to promote decision making in nursing.

**NURS 467 Leadership Practicum 0c-6I-2cr**

**Prerequisite:** NURS 334

**Prerequisite or Corequisite:** NURS 412

Focuses on role development in management and leadership for the Registered Nurse. Planned individualized experiences will afford opportunities to apply management and leadership theories in a workplace setting. Faculty members will guide the student in theory-based practice and synthesis of theory to practice experiences.

**NURS 469 Community Health Practicum 0c-6I-2cr**

**Prerequisite:** NURS 334

**Prerequisite or Corequisite:** NURS 434

Allows the Registered Nurse to apply knowledge to the practice of community-based and community health nursing. Emphasizes health promotion, risk reduction, and disease prevention in a wide variety of community settings and with diverse populations.

**NURS 480 Seminar in Nursing var-1-3cr**

A seminar which provides a forum for the exploration and discussion of issues relevant to the professional nurse. Emphasizes the development of professional values, critical thinking, decision-making, and communication skills. A selection of topics on current issues and trends is offered; each focuses on a particular theme related to nursing practice.

**NURS 481 Special Topics var-1-3cr**

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**NURS 482 Independent Study var-1-3cr**

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**NURS 493 Internship var-1-12cr**

**Prerequisites:** NURS 236 or Licensed Practical Nurse or Registered Nurse; 60cr completed; minimum 2.0 GPA

A supervised experience in a practice setting which extends and complements coursework in nursing. The types of practice settings may include acute care hospitals, outpatient health centers, and community agencies.

**PHIL: Philosophy**

**Department of Philosophy**

**College of Humanities and Social Sciences**

**PHIL 101 Informal Logic: Methods of Critical Thinking 3c-0I-3cr**

Develops ability to analyze critically deductive and inductive argumentation, rhetoric, and persuasion by examples drawn from media, textbooks, advertising, scholarly works, personal contacts, etc.

**PHIL 110 Reasoning and the Law 3c-0-3cr**

Emphasizes development of critical thinking in the context of legal reasoning. Students are exposed to issues in the law and to modes of reasoning required in that domain and others. Application of principles and methods to detailed analysis of well-known judicial cases.

**PHIL 120 Introduction to Philosophy 3c-0I-3cr**

Acquaints the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, and value theory.

**PHIL 221 Symbolic Logic I 3c-0I-3cr**

An introduction to fundamental concepts in deductive logic with an emphasis on teaching the basis of clear, logical thought. Some of the historical origins of logical theory are explored. Students learn to symbolize arguments in the truth-functional logic and the predicate logic. Ways of testing arguments for validity as well as proofs are covered, with a stressing of application to actual arguments drawn from numerous sources in the media, philosophical issues, and moral problems.

**PHIL 222 Ethics** **3c-01-3cr**

An investigation of efforts to rationally justify moral judgment. Deals with fundamental issues such as: What is morality? Are moral notions cultural, rational, divine, or innate in origin? Are they relative or absolute? Are they freely chosen or determined by genetics and/or environment? Covers a variety of ethical theories significant both historically and contemporarily and applies those theories to current issues which involve moral dilemmas.

**PHIL 223 Philosophy of Art** **3c-01-3cr**

Investigates some of the major problems in the philosophy of art, e.g., the nature of beauty and the aesthetic experience, the ethics and politics of art, creativity, the nature of the work of art and aesthetic objects, the concept of fine art, and the evaluation of works of art and aesthetic objects.

**PHIL 232 Philosophical Perspectives on Love, Marriage, and Divorce** **3c-01-3cr**

Examines the philosophical foundations of contemporary Western institutions and ideologies of romantic love. Considers major positions in both the history of philosophy and contemporary philosophy. Investigates the concepts, problems, and philosophical theories central to understanding romantic love, marriage, and divorce.

**PHIL 281 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PHIL 321 Symbolic Logic II** **3c-01-3cr**

**Prerequisite:** PHIL 221

Reviews sentential and predicate logic as presented in PHIL 221. Metalogical results concerning relations between derivability and entailment are studied in detail. Techniques and results important for mathematics computer science are highlighted. May explore modal logic or nonclassical sentential logics.

**PHIL 323 Political Philosophy** **3c-01-3cr**

An inquiry into the philosophical concepts underlying the major political theories from ancient Greece to the modern era. Emphasizes major authors and texts to demonstrate a continuum of ideas and their modifications, replacement, and revival, as well as novel political ideas. Possible topics: commonality; peace; internationalism; sovereignty; nature of the state; law; the ruler; cosmopolitanism; nationalism; social contract; liberty; obligation; property; racism; sexism; slavery.

**PHIL 324 Ancient Philosophy** **3c-01-3cr**

Explores the foundations of Western Philosophy through examination of important philosophers of the Ancient period, such as the Pre-Socratic philosophers, Socrates, Plato, and Aristotle. Topics may include the nature of the physical universe, Plato's theory of Forms, the nature of happiness, and the possibility of morality.

**PHIL 325 Modern Philosophy** **3c-01-3cr**

A study of exemplary philosophical texts from the late sixteenth through the late eighteenth century. Figures may include Descartes, Hobbes, Locke, Spinoza, Berkeley, Leibniz, Hume, and Kant. Explores such topics as the nature of matter and mind, the possibility and limits of knowledge, and the emerging scientific challenge to church and ancient authority.

**PHIL 326 Phenomenology and Existentialism** **3c-01-3cr**

A study of the phenomenological method as developed by Edmund Husserl and of the subsequent phenomenological movement as exemplified in the works of such representative figures as Heidegger, Merleau-Ponty, and Paul Ricoeur and of existentialism both as an independent movement of thought and as influenced by phenomenology and exemplified in the works of such representative figures as Kierkegaard, Jaspers, Marcel, Buber, and Sartre.

**PHIL 330 Philosophy of Science** **3c-01-3cr**

An investigation into the nature of formal and empirical sciences: structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific laws and theoretical

concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. No special background required. Recommended for math and science majors.

**PHIL 360 Philosophy of the Mind** **3c-01-3cr**

**Prerequisite:** PHIL major or minor, or junior or senior standing, or instructor permission

Focuses on the Mind-Body Problem. Topics covered may include dualism, logical behaviorism, identity theories, functionalism, various forms of physicalism, mental causation, reductionism, and consciousness.

**PHIL 400 Ethics and Public Policy** **3c-01-3cr**

An analysis of the ethical dimension of public policies. Provides a general understanding of ethical theories, then focuses on their application to specific policy issues. Topics vary from semester to semester. See current schedule of classes.

**PHIL 405 Justice and Human Rights** **3c-01-3cr**

An introduction to theories of justice and an analysis of the concept of human rights which is central to a just society and to much moral, political, and legal dispute. Explores relevant major positions in the history of philosophy, but major focus is contemporary and raises issues such as women's rights, black rights, animal and environmental rights, welfare rights, and rights to life (or death).

**PHIL 410 Contemporary Analytic Philosophy** **3c-01-3cr**

Examines Anglo-American philosophy from the early twentieth century onward. Explores early attempts to solve traditional philosophical problems with newly developed methods of logical and linguistic analysis, and also later challenges to such attempts. Authors may include Frege, Russell, Moore, Wittgenstein, Ayer, Austin, Quine, Davidson, Strawson, and Sellars.

**PHIL 420 Metaphysics** **3c-01-3cr**

Explores the nature of reality through investigation of such concepts as substance, cause, freedom, and God. Draws on both historical and contemporary writings. Other topics may include the nature of space and time, the role of language in comprehending reality, the possibility of non-sensory knowledge, and the nature of possibility and necessity.

**PHIL 421 Theory of Knowledge** **3c-01-3cr**

Examines various views concerning the nature of knowledge, belief, and justification. Readings drawn from a wide range of historical and contemporary authors. Additional topics may include perceptual knowledge, common sense, skepticism, and the relation between a knower and the community.

**PHIL 450 Philosophy of Law** **3c-01-3cr**

An examination of the nature of law and its relationship to such questions as morality, obligation, judicial review, justice, rights, punishment, liberty. Combines philosophical theory with consideration of selected court cases to develop a philosophical and legal understanding of law and its place in society.

**PHIL 460 Philosophy of Language** **3c-01-3cr**

An investigation of issues in the philosophy of language and related issues in linguistics (including anthropological linguistics, sociolinguistics, and psycholinguistics). Topics include, for example, the influence of language on perception, rationalist/empiricist perspectives on language acquisition, language and political control, reference, meaning, and truth.

**PHIL 480 Honors Seminar in Philosophy** **3c-01-3cr**

**Prerequisites:** Philosophy honors students or instructor permission  
An advanced forum for detailed exploration of a single topic or single author, subject to instructor's choice. Enrollment limited to students designated as candidates for honors, to members of the Honors College who satisfy any additional prerequisites set by instructor, and to other PHIL majors by invitation or permission.

**PHIL 481 Special Topics** **var-1-3cr**

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**PHIL 482 Independent Study** var-1-6cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
 Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. May be taken more than once to a maximum of 6cr. (This option is available to both PHIL majors and nonmajors.)

**PHIL 483 Honors Thesis** var-1-6cr  
**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
 An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**PHIL 493 Internship in Philosophy** var-3-6cr  
**Prerequisites:** Permission of the department, junior or senior PHIL major or double major, 2.5 GPA  
 A supervised experience of no longer than one semester and no less than five weeks. This would take place in either a public or private organization in areas that either extend and develop or complement coursework in philosophy. Log and/or major paper required. Internships are to be done with a clear analysis, argumentation, and examination of governing principles.

**PHYS: Physics**  
**Department of Physics**  
**College of Natural Sciences and Mathematics**

**PHYS 100 Prelude to Physics** 3c-01-3cr  
**Prerequisite:** MATH 100 or equivalent high school preparation  
 Prepares students for their first course in quantitative physics by reviewing fundamental concepts involving measurement and error, graphing, motion, and applications of Newton's Laws in developing problem-solving skills. Also presents a historical perspective as well as introduces the many opportunities that exist for those with a background in physics.

**PHYS 101 Energy and Our Environment** 3c-01-3cr  
 An overview of the areas of energy, transportation, and pollution. These topics are approached via the relevant concepts of physical science and physics. A nonlaboratory course for Liberal Studies requirements.

**PHYS 105 The Physics of Light and Sound** 3c-01-3cr  
 The study of light and sound as applied in the production of objects of art and the production of music. Includes the study of vision, light in nature, photography, and artistic media and the study of hearing, musical sound, musical instruments, and room acoustics.

**PHYS 111 Physics I Lecture** 3c-01-3cr  
**Prerequisites:** Elementary algebra and trigonometry  
 General college physics; mechanics, wave motion, and sound.

**PHYS 112 Physics II Lecture** 3c-01-3cr  
**Prerequisite:** PHYS 111  
 Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.

**PHYS 115 Physics I for Electro-Optics** 2c-3l-3cr  
**Prerequisite:** PHYS 100  
**Corequisite or Prerequisite:** MATH 110 or 121  
 Introduces the mechanical universe through the study of the motion of matter and waves and the causes of waves. The learning of quantitative problem solving skills is emphasized. Includes a lab component.

**PHYS 116 Physics II for Electro-Optics** 2c-3l-3cr  
**Prerequisite:** PHYS 115  
 By applying Newton's Laws of Motion to atoms and molecules, introduces the basic principles of and connections between temperature, heat, and molecular motion at a fundamental level. Concepts involved in fluid flow, electric charge, and the origin of magnetism are covered. The fundamental basis for the existence of electric and magnetic fields and the generation of electromagnetic energy as waves are explored. Includes a lab component.

**PHYS 121 Physics I Lab** 0c-3l-1cr  
**Corequisite:** PHYS 111  
 Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound.

**PHYS 122 Physics II Lab** 0c-3l-1cr  
**Corequisite:** PHYS 112  
 Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity.

**PHYS 131 Physics I-C Lecture** 3c-01-3cr  
**Prerequisite:** MATH 121 or 125, at least concurrently  
 A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111 but are treated in more depth through the use of calculus.

**PHYS 132 Physics II-C Lecture** 3c-01-3cr  
**Prerequisite:** MATH 122 or 126, at least concurrently  
 A continuation of Physics I-C; topics covered are similar to those covered in Physics II but are treated in more depth through the use of the calculus.

**PHYS 141 Physics I-C Lab** 0c-3l-1cr  
**Corequisite:** PHYS 131  
 Physics laboratory at same level as Physics I-C; exercises in mechanics, wave motion, and sound.

**PHYS 142 Physics II-C Lab** 0c-3l-1cr  
**Corequisite:** PHYS 132  
 Physics laboratory at same level as Physics II-C; exercises in optics, electricity and magnetism, and radioactivity.

**PHYS 151 Medical Physics Lecture** 3c-01-3cr  
 Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.

**PHYS 161 Medical Physics Lab** 0c-3l-1cr  
**Corequisite:** PHYS 151  
 Experiments dealing with applications of physical principles to the field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern-day medicine will be introduced.

**PHYS 222 Mechanics I** 2c-01-2cr  
**Prerequisites:** PHYS 112 or 116 or 132; MATH 122 or 126  
 Covers the basic laws and concepts of the mechanical universe. The dynamics of a particle in one, two, and three dimensions are covered. Central forces, including planetary and satellite motion, are discussed and analyzed in detail using Newton's gravitational law. Other topics covered are statics, multiple particle system dynamics, mechanical energy, and oscillations.

**PHYS 223 Mechanics II** 2c-01-2cr  
**Prerequisites:** MATH 241, PHYS 222  
 Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics.

**PHYS 231 Electronics** 3c-3l-4cr  
**Prerequisites:** MATH 122 or 126; PHYS 112 or 132  
 Circuit theory, transients, transistor circuits, frequency response, input and output impedance, feedback, and electronic noise. Operational amplifiers and digital electronics.

**PHYS 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PHYS 299 Cooperative Education I** var-1-3cr  
**Prerequisites:** PHYS 132; completion of 30cr with a minimum 2.0 GPA and approval of the cooperative education coordinator  
 Blends classroom theory with practical application through job-related experience. Students work in positions offered by the participating industrial or federal/state work-study program employers under joint supervision of

the Physics faculty and the on-site supervisor. The participant must be a full-time IUP student in good academic standing and be planning to return to campus for completion of his/her degree program. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee.

**PHYS 322 Electricity and Magnetism I** 2c-01-2cr  
**Prerequisite:** PHYS 222

Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell equations for static fields, and Legendre's polynomials and other approximation methods.

**PHYS 323 Electricity and Magnetism II** 2c-01-2cr  
**Prerequisite:** PHYS 322

Time-dependent form of Maxwell equations, electromagnetic induction, vector potential, magnetism, radiation fields, and Poynting vector.

**PHYS 331 Modern Physics** 3c-01-3cr  
**Prerequisites:** PHYS 112 or 116 or 132; MATH 122 or 126

The history of modern physics is covered. Particle and wave properties of matter are explored using the ideas of quantum mechanics. Systems examined using the ideas of quantum and classical mechanics are atomic structure, solid state, and nuclear physics. The special theory of relativity will also be covered. Some of the problems are solved using computers.

**PHYS 342 Thermal and Statistical Physics** 3c-01-3cr  
**Prerequisites:** MATH 122 or 126; PHYS 112 or 132

Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics.

**PHYS 345 Optics** 3c-01-3cr  
**Prerequisites:** MATH 122 or 126; PHYS 112 or 132

Geometrical optics and physical optics, including interference, diffraction, and polarization. Quantum optics is introduced.

**PHYS 350 Intermediate Experimental Physics I** 0c-6I-3cr  
**Prerequisites:** PHYS 331; PHYS 342 or EOPT 120

Performs required fundamental experiments in areas of mechanics, optics, modern physics, and heat. Speaking before other classmates and faculty and competence in writing scientific papers and reports are emphasized. Effectiveness in the collection of data is important. Computers will often be utilized to perform data taking and analysis.

**PHYS 351 Intermediate Experimental Physics II** 0c-6I-3cr  
**Prerequisite:** PHYS 350

Increasingly sophisticated experiments in essential areas of physics. Digital computers and the Van de Graaff are available.

**PHYS 352 Applied Physics Laboratory** 0c-6I-3cr  
**Prerequisites:** PHYS 231, 355, or instructor permission

An introduction to much of the fundamental equipment used in industry. Trains students in the operation and proper use of this equipment through a series of experiments that teach signal detection and analysis including data acquisition by computer. Provides instruction on the proper methods to be used for various oral and written presentations.

**PHYS 353 Solid State Electronics Laboratory** 0c-6I-3cr  
**Prerequisite:** PHYS 352 or instructor permission

Encounters a number of areas of current interest in semiconductor technology. Student performs experiments and learns skills in such areas as device process simulation, device simulation, measurements of semiconductor materials, and measurement of device parameters. Also covers proper presentation of written and oral reports.

**PHYS 355 Computer Interfacing** 2c-2I-3cr  
**Prerequisite:** COSC 110

Teaches the fundamentals of interfacing the personal computer to its physical surroundings. Teaches how to collect data and to control experiments in real time. Shows how to use digital-to-analog conversion (DAC) techniques and analog-to-digital conversion (ADC) techniques. A graphical

software package (such as LabVIEW) is also used to design icon-based interfacing tools, to learn how to use virtual instruments, and to analyze data.

**PHYS 399 Cooperative Education II** var-1-3cr

**Prerequisites:** PHYS 299; PHYS 350; completion of 80cr with a minimum 2.5 GPA and approval of the cooperative education coordinator  
A second course in cooperative education. Includes instruction that builds upon learning experiences in college by combining and correlating them with learning experiences at the training station to meet the student's career goals. Evaluation requirements may include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental cooperative education committee. No more than 3cr of PHYS 299, 399, and/or 493 may be used to fulfill Physics major course requirements.

**PHYS 401 Theoretical Physics** 3c-01-3cr

**Prerequisites:** PHYS 131, 132; MATH 125, 126

**Prerequisite or Corequisite:** MATH 241 or department permission  
Explores the applied mathematics necessary to solve ordinary and partial differential equations in closed and series forms for boundary value problems in intermediate and advanced physics. Coordinate transformations, tensor analysis, special functions, and series involving complex variables and integral transforms are also considered.

**PHYS 432 Advanced Electronics** 2c-3I-3cr

**Prerequisite:** PHYS 231

Digital measurement, switching circuits, logic circuits, counting, coding, input and output, AD and DA converters, computer organization.

**PHYS 441 Classical Mechanics** 3c-01-3cr

**Prerequisites:** PHYS 131, 132; MATH 125, 126

**Corequisite:** MATH 241 or Physics department permission

Covers vectors, generalized coordinates, and coordinate-transformations to study the mechanics of a particle and a system of particles in one, two, and three dimensions. Central forces, planetary, and satellite motion, rotation, oscillations, and conservation laws in the Newtonian formulation of classical mechanics are included and used to solve dynamical problems for various mechanical systems.

**PHYS 451 Electricity and Magnetism** 3c-01-3cr

**Prerequisites:** PHYS 131, 132; MATH 125, 126

**Prerequisite or Corequisite:** PHYS 441 or department permission

Treats elements of vector analysis, electrostatics, special techniques for finding electric potential, electric field in matter, magnetostatics, magnetic field in matter, electrodynamics, Maxwell's equations, and electromagnetic waves at the calculus level.

**PHYS 461 Quantum Mechanics I** 3c-01-3cr

**Prerequisites:** PHYS 331 and MATH 241

Quantum mechanics following methods of Schrodinger and Heisenberg; application to harmonic oscillator; three-dimensional Schrodinger equation; hydrogen atom; electron in a magnetic field—normal and anomalous Zeeman effect; spin. (Offered as PHYS 473 prior to 2010-2011)

**PHYS 472 Nuclear Physics** 3c-01-3cr

**Prerequisite:** PHYS 331

A survey of nuclear physics, nuclear size, nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces, and elementary particles.

**PHYS 475 Physics of Semiconductor Devices I** 3c-01-3cr

**Prerequisites:** PHYS 231, 342, 342, or instructor permission

Develops the basic foundation for a study of the theory of semiconductors. Elementary quantum concepts, the band theory of solids, electrical properties of solids, effective mass theory, and principles of semiconductor devices are discussed.

**PHYS 476 Physics of Semiconductor Devices II** 3c-01-3cr

**Prerequisite:** PHYS 475 or instructor permission

Discusses the physics and operation of a number of discrete devices including bipolar transistors, MOSFETS, JFETS, CCDs, various diode technolo-



gies, photovoltaic and photoconductive devices, solid-state lasers, and light-emitting diodes.

**PHYS 480 Seminar** **var-1cr**  
Speakers from within and outside the university conduct a seminar on a weekly or biweekly basis on different topics of interest in the physics community.

**PHYS 481 Special Topics in Physics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
Varies from semester to semester and covers diverse topics in specific areas of physics. This course number is also used to offer courses under development.

**PHYS 482 Independent Study in Physics** **var-1-6cr**  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources. Work is supervised by a Physics faculty member but does not necessarily involve regular lecture or laboratory hours.

**PHYS 490 Solid-State Physics** **3c-01-3cr**  
**Prerequisites:** PHYS 223 and 331  
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons. Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity.

**PHYS 493 Internship in Physics** **var-1-3cr**  
**Prerequisites:** PHYS 350, completion of 90cr with a minimum 2.5 GPA, and approval of the internship education coordinator  
A supervised professional work-experience in physics and applied physics. Location, duties, internship, and hours are individually tailored to the student's career goals. A maximum of 3cr of internship in the student's major may be applied toward the physics major area elective requirements. Additional internship credit must be used as free electives. Evaluation requirements include on-site visitations by the faculty/coordinator, consultation with the on-site supervisor, and a major progress report by the student or the presentation of a detailed oral report before the departmental internship education committee.

### **PLSC: Political Science**

#### **Department of Political Science**

#### **College of Humanities and Social Sciences**

**PLSC 101 World Politics** **3c-01-3cr**  
An analysis of contemporary (post-1945) state system and forces shaping the world in which we live. Student is given a framework within which to analyze contemporary international politics.

**PLSC 111 American Politics** **3c-01-3cr**  
An introduction to American national government and politics, emphasizing Constitution, party system, Congress, Presidency, courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

**PLSC 250 Public Policy** **3c-01-3cr**  
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties, and our governmental institutions; attention also directed toward the political-economical nexus within American society.

**PLSC 251 State and Local Political Systems** **3c-01-3cr**  
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

**PLSC 280 Comparative Government I: Western Political Systems** **3c-01-3cr**  
Analyzes Western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.

**PLSC 281 Special Topics** **var-1-3cr**  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**PLSC 282 International Relations** **3c-01-3cr**  
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.

**PLSC 283 American Foreign Policy** **3c-01-3cr**  
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

**PLSC 285 Comparative Government II: Non-Western Political Systems** **3c-01-3cr**  
Analyzes major non-Western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.

**PLSC 300 Research Methods in Political Science** **3c-01-3cr**  
**Prerequisite:** PLSC 101 or 111  
An examination of the application of the scientific approach to the investigation of social and political phenomena. Concentrates on approaches, methods, and computer tools. All PLSC majors and minors are strongly urged to enroll.

**PLSC 320 International Law** **3c-01-3cr**  
**Prerequisites:** PLSC 101, 281, or instructor permission  
The study of the development, nature, and function of international law, including recent trends.

**PLSC 321 International Organizations** **3c-01-3cr**  
**Prerequisites:** PLSC 101, 281, or instructor permission  
An inquiry into purposes, structures, and actions of contemporary international political organizations, such as United Nations, regional, and functional organizations.

**PLSC 346 Political Sociology** **3c-01-3cr**  
**Prerequisites:** PLSC 111, SOC 151  
Examines a) who controls the state and state policy, b) the role the state plays in stabilizing capitalism and protecting the power of the upper class, c) the political activities of the middle and upper class, d) labor, civil rights, welfare rights, and social movements in America. Cross-listed as SOC 458.

**PLSC 350 The Presidency** **3c-01-3cr**  
An examination of the Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and governor.

**PLSC 351 Legislative Process** **3c-01-3cr**  
A functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aides, and controls over legislation.

**PLSC 354 Metropolitan Problems** **3c-01-3cr**  
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

**PLSC 355 Intergovernmental Relations** **3c-01-3cr**  
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

**PLSC 358 Judicial Process** **3c-01-3cr**  
**Prerequisite:** PLSC 111

Explores nature and limits of judicial power, courts as policymaking bodies, selection of judges, decision process, external forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

**PLSC 359 Constitutional Law and Civil Liberties** 3c-01-3cr  
**Prerequisite:** PLSC 111

A study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

**PLSC 360 Classical Political Thought** 3c-01-3cr  
**Restriction:** Not for credit after PHIL 323

The origins and development of Western thought from Plato and Aristotle through Cicero and Saint Thomas Aquinas. Focuses especially on political participation as a way of life, the unity of political and moral conceptions in premodern political thought, and the relationship between order and justice.

**PLSC 361 Modern Political Thought** 3c-01-3cr

Covers the major representatives of modern political thought since the Renaissance. Follows the development of the specifically modern notion of the state and political action through the works of Machiavelli, Hobbes, Locke, Rousseau, Marx, and Lenin. Emphasizes the “instrumentalist” state and the idea of a political science.

**PLSC 362 American Political Thought** 3c-01-3cr

Covers a variety of American political ideas from the Puritans through recent radical and conservative critiques of American liberal democracy. Focus on the continuing development of the idea of individual rights, the political theory of the Constitution, and the tension between classical liberalism and popular rule.

**PLSC 370 Introduction to Public Administration** 3c-01-3cr

Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

**PLSC 371 Issues in Public Administration** 3c-01-3cr

An intensive study of the role of federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

**PLSC 376 Public Sector Budgeting and Financial Management** 3c-01-3cr

Addresses budgeting and financial management in public organizations with an emphasis on state and local government. Theory and practice are integrated in the study of financial condition assessment, operating budget preparation, process and analysis, capital infrastructure assessment, project planning and budgeting, short- and long-term debt financing/administration, accounting and auditing as foundations for managerial oversight and control, performance measurement, cash management and investments, and pension administration.

**PLSC 377 Political Behavior** 3c-01-3cr  
**Prerequisites:** PLSC 111, PSYC 101

An interdisciplinary course which investigates the psychological bases of political behavior. Cross-listed as PSYC 377.

**PLSC 382-387 Political Systems** 3c-01-3cr  
**Suggested Prerequisites:** PLSC 280 and/or 285

An intensive, comparative study of the government and politics of a selected region. PLSC 382 Africa (currently inactive); PLSC 383 Asia; PLSC 384 Middle East; PLSC 385 Central and Eastern Europe; PLSC 387 Latin America

**PLSC 388 Political-Military Strategy** 3c-01-3cr  
**Prerequisites:** PLSC 281 or 283 or MLSC 101-102

Deals with national security problems including decision making and budgeting, levels of strategy, the utility of force, and the impact of the military on American society.

**PLSC 389 Developing Nations** 3c-01-3cr  
**Suggested Prerequisites:** PLSC 280 and/or 285

Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building.

**PLSC 465 Intelligence Process and Policy** 3c-01-3cr

Demystifies intelligence and focuses on the critical thinking and intellectual skills the process of intelligence requires to provide government, private, and nonprofit decision makers with useful information upon which to base sound decisions: collecting, analyzing, and providing data to those decision makers. Students also examine the impact of the structure and role of the intelligence community in formulating U.S. national security policy.

**PLSC 480 Political Science Seminar** 3c-01-3cr

Readings and written assignments on a specific topic determined by the instructor in charge.

**PLSC 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**PLSC 482 Independent Study** var-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost’s Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**PLSC 493 Political Science Internship** var-2-12cr

**Prerequisites:** 9cr in Political Science with 2.0 GPA; PLSC 111; approval of internship director and chairperson  
Practical experience in government and politics. Log and research project required. Course grade determined by the instructor. Maximum of 6cr applied to minimum in major; maximum of 3cr applied to minimum in minor.

**PNAF: Pan-African Studies**  
**College of Humanities and Social Sciences**

**PNAF 131 Introduction to Pan-African Studies** 3c-01-3cr

A multidisciplinary introduction to Africa and the African diaspora. Explores the effects of Africa’s history, in particular colonialism and independence, on present-day Africa; examines the relationship between Africa and the African diaspora with special attention to African arts, social systems, and political and economic development; looks at Africa’s contribution to contemporary culture in the Americas.

**PNAF 281 Special Topics** 3c-01-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are primarily for lower-level undergraduate students.

**PNAF 481 Special Topics** 3c-01-3cr

**Prerequisite:** Instructor permission and program coordinator  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**PNAF 482 Independent Study** var 1-to-3cr

**Prerequisite:** Prior approval through advisor, faculty member, program coordinator, dean, and Provost’s Office  
Students with interest in an independent study of a Pan-African Studies-related topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**PNAF 493 Pan-African Studies Internship** 3-12cr  
**Prerequisites:** Instructor permission; 9cr completed and/or with coordinator's permission  
 Offers practical experience in a field where knowledge of and understanding of the Pan-African world and/or people of African descent are directly utilized.

**PSYC: Psychology**  
**Department of Psychology**  
**College of Natural Sciences and Mathematics**

**PSYC 101 General Psychology** 3c-01-3cr  
 An introduction to the scientific study of behavior and mental processes.

**PSYC 280 Psychological Inquiry** 3c-01-3cr  
**Prerequisites:** PSYC 101, PSYC minors  
 Introduces students minoring in Psychology to issues central to carrying out and interpreting empirical research in the field. Students become more sophisticated consumers of empirical research findings. May not be taken for credit after successful completion of PSYC 290.

**PSYC 290 Research Design and Analysis I** 3c-21-4cr  
**Prerequisites:** MATH 217, PSYC 101  
 A laboratory course devoted to designing, conducting, and evaluating results of psychological experiments.

**PSYC 291 Research Design and Analysis II** 3c-21-4cr  
**Prerequisites:** PSYC 101, grade of C or better in PSYC 290  
 A continuation of Research Design and Analysis I.

**PSYC 310 Developmental Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 A comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individuals. A survey course directed at students not planning to take PSYC 311 or 312. May receive credit towards the PSYC major or minor for only one of PSYC 310, 311, or 315.

**PSYC 311 Child Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 The study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual. Students may receive credit towards the PSYC major or minor for only one of PSYC 310, 311, or 315.

**PSYC 312 Adult Development and Aging** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 A survey of physiological, cognitive, emotional, and social issues affecting the young adult, the middle-aged, and the elderly. Includes an examination of significant adult life crises.

**PSYC 315 Experimental Development Psychology** 3c-21-4cr  
**Prerequisite:** PSYC 280 or 290  
 Studies human development from conception to death with emphasis on the physical, cognitive, and emotional domains. Students are involved in observation and data collection. Students may receive credit towards the PSYC major or minor for only one of PSYC 310, 311, or 315.

**PSYC 320 Personality** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 Provides comparative analysis of major representative traditional and contemporary theories of personality.

**PSYC 321 Abnormal Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.

**PSYC 325 Psychological Testing and Measurement** 3c-21-4cr  
**Prerequisites:** MATH 217, PSYC 101, sophomore standing  
 Presents a series of focused discussions on principles, methods, and issues of psychological measurement. Also describes the major psychological tests currently in use and illustrates the administration and scoring of these tests.

The laboratory activities are intended to provide hands-on experiences in computerized analysis and evaluation of psychological tests, to demonstrate test administration and scoring in practical settings, and to enhance the understanding of psychological testing through class projects.

**PSYC 330 Social Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 The study of the effects of the social environment on human behavior. Topics include perception of person, attitude formation and change, and small-group interaction. Students may not receive credit toward psychology major or minor for both PSYC 330 and 335.

**PSYC 331 Environmental Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 The study of the relationship between human behavior and its environmental context. Emphasizes the physical environment, both natural and built.

**PSYC 335 Experimental Social Psychology** 3c-21-4cr  
**Prerequisite:** PSYC 280 or 290  
 A laboratory course in the effects of the social environment on human behavior. Topics include perception of persons, attitude formation and change, and small-group interaction. Includes experience with social psychological research methods. May not be taken for credit after successful completion of PSYC 330.

**PSYC 341 Conditioning and Learning** 3c-21-4cr  
**Prerequisites:** PSYC 101, 290  
 An examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.

**PSYC 342 Human Cognition: Memory and Thinking** 3c-21-4cr  
**Prerequisites:** PSYC 101, 290  
 A study of methods and findings in areas of human memory and human information processing. Students may not receive credit towards the PSYC major or minor for both PSYC 342 and 345.

**PSYC 345 Introduction to Human Cognition** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 Provides an overview of cognitive psychology. The Information Processing Model is contrasted with its predecessor, Behaviorism, and its contemporary challenger, Connectionism. May not receive credit towards the PSYC major or minor for both PSYC 342 and 345.

**PSYC 350 Physiological Psychology** 3c-21-4cr  
**Prerequisites:** PSYC 101, 290  
 A study of the relationship between behavior and the anatomy and physiology of the nervous system. May not receive credit towards the PSYC major or minor for both PSYC 350 and 356.

**PSYC 355 Comparative Psychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 A survey of animal behavior patterns and control mechanisms including learning, development, communication, and social behavior. Emphasizes the relationship of the animal to its environment and the relationship of animal models to human behavior.

**PSYC 356 Biopsychology** 3c-01-3cr  
**Prerequisite:** PSYC 101  
 A study of the relationship between behavior and the anatomy and physiology of the nervous system. May not receive credit towards the PSYC major or minor for both PSYC 350 and 356.

**PSYC 359 Sensation and Perception** 3c-21-4cr  
**Prerequisite:** PSYC 290  
 Introduces the biological and psychological processes that determine our perceptions and their relationships to physical properties of the environment. Laboratory work provides the opportunity to explore lecture and textbook topics firsthand and to collect and analyze psychophysical data.

**PSYC 371 Human Motivation** 3c-01-3cr  
**Prerequisite:** PSYC 101

A systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.

**PSYC 372 Drugs and Behavior** 3c-01-3cr

**Prerequisites:** PSYC 101 and junior standing or permission

A survey of the current knowledge concerning the actions of drugs. Includes legal and social issues surrounding drug use, hazard potential of commonly used drugs, review of current theories and issues regarding the use of drugs in psychotherapy, and consideration of treatment approaches for addiction.

**PSYC 374 Stress and Coping** 3c-01-3cr

**Prerequisite:** PSYC 101

Fundamental concepts and findings in stress and stress-related disorders. Relationships of stress to disease and methods for coping with stress are presented.

**PSYC 375 Mass Media and Behavior** 3c-01-3cr

**Prerequisites:** PSYC 101 and junior or senior status

Theory and research on the influence of the mass media on human behavior and attitudes. Topics include the effects of news and political advertising on public opinion; the effects of racist and sexist portrayals; and the effects of violence and pornography on aggressive behavior. (Also offered as COMM 375; may not be taken for duplicate credit)

**PSYC 376 Psychology of Health Behavior** 3c-01-3cr

**Prerequisite:** PSYC 101

An examination of the role of behavior factors in health status with a strong focus on preventive health behaviors and the role of the psychologist in promotion of health-related behavioral changes.

**PSYC 378 Psychology of Death and Dying** 3c-01-3cr

**Prerequisite:** PSYC 101

Theories and research which delineate the psychological factors affecting the dying person as well as those persons close to one who is dying are discussed.

**PSYC 379 Psychology of Human Sexuality** 3c-01-3cr

**Prerequisite:** PSYC 101

An overview of the psychological issues and research relevant to sexuality with an emphasis on gender roles. Social, psychological, and gender perspectives are used to examine a number of topics, including contemporary sexual attitudes, sexual response, sexual relationships, sexual dysfunction, sexual variations, sexual preference, and sexual violence. Research pertaining to each topic is presented. Students are encouraged to critically evaluate research and theory and to make connections between the material and their personal experience.

**PSYC 388 Forensic Psychology** 3c-01-3cr

**Prerequisite:** PSYC 101

An examination of current topics at the interface between psychology and the legal system.

**PSYC 389 Psychology of Music** 3c-01-3cr

**Prerequisite:** PSYC 101

An overview of theory and research on the psychological foundations of music, including music cognition, music perception, and the social psychology of music.

**PSYC 390 Industrial-Organizational Psychology** 3c-01-3cr

**Prerequisites:** MATH 214 or 217, PSYC 101

The study of psychological principles in work organizations; application of psychological theory to the understanding and explanation of individual behavior and experience in work organizations. May not be taken for credit after successful completion of PSYC 425.

**PSYC 410 Historical Trends in Psychology** 3c-01-3cr

**Prerequisites:** PSYC 101, junior or senior standing or permission

A comprehensive overview of historical antecedents of contemporary psychology with an emphasis on their implications for future developments in the field.

**PSYC 411 Psychology of Women** 3c-01-3cr

**Prerequisites:** PSYC 101, junior or senior standing or instructor permission

A critical examination of the assumptions about women which are held by the discipline of psychology, considering both current research and individual experience. The psychological effects of socialization on sex role identity, achievement, interpersonal power, mental health, and critical incidents in female development are discussed in the context of relevant concepts from developmental and social psychology.

**PSYC 421 Psychology of Work** 3c-01-3cr

**Prerequisites:** PSYC 101, junior/senior standing

Introduces the human experience in work situations. Emphasizes the analysis, measurement, prediction, and development of human aptitude, ability, and performance in work and employment situations.

**PSYC 425 Experimental Organizational Psychology** 3c-21-4cr

**Prerequisite:** 12cr of PSYC (including PSYC 290), beyond PSYC 101

Introduces theory, research, and methods in the investigation of human behavior and experience in organizations. Both classical and current literature in the field are discussed. In addition to lecture, students conduct empirical research projects.

**PSYC 450 Introduction to Clinical Psychology** 3c-01-3cr

**Prerequisites:** PSYC 101, 320, 321, and instructor permission

An overview of clinical psychology, with emphasis on clinician's use of methods of evaluation and on treatment and modification of behavior.

**PSYC 480 Honors Seminar in Psychology** 3c-01-3cr

A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6cr.

**PSYC 481 Special Topics in Psychology** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students. May be taken more than once to a maximum of 6cr.

**PSYC 482 Independent Study in Psychology** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6cr. Approval is based on academic appropriateness and availability of resources.

**PSYC 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**PSYC 493 Psychological Practicum** var-1-12cr

**Prerequisites:** PSYC 101 and department permission

Under supervision of Psychology Department, selected students receive experience in application of psychological techniques. May be taken more than once to a maximum of 12cr.

**QBUS: Quantitative/Business**

**Department of Management Information Systems  
and Decision Sciences**

**Eberly College of Business and Information Technology**

*Note:* Except for Accounting, Business Education, and nonbusiness majors who have met the required prerequisites, students scheduling 300 and 400 courses are expected to have achieved junior standing as described in the Eberly College of Business and Information Technology Academic Policies.

**QBUS 215 Business Statistics** 3c-01-3cr  
**Prerequisite:** MATH 214  
Expands upon the probabilistic concepts developed in MATH 214 to orient the student toward managerial decision making using quantitative methodologies. Topics include classical regression analysis, forecasting, Bayesian decision theory, linear programming, and simulation.

**QBUS 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are primarily for lower-level undergraduate students.

**QBUS 380 Introduction to Management Science** 3c-01-3cr  
**Prerequisite:** QBUS 215  
Discussion and application of mathematical models used in managerial decision making. Linear programming, Markov processes, queuing theory, EOQ models, and simulation techniques are among the topics covered.

**QBUS 401 Forecasting Methods for Business** 3c-01-3cr  
**Prerequisite:** QBUS 215  
Trains students to understand the nature of forecasting problems and the techniques of forecasting methods and their business applications. Computer statistical packages are incorporated so that forecasting methods and models can be applied to real-world problems and the relationships that exist between variables can be examined.

**QBUS 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**QBUS 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**REAL: Real Estate**  
**Department of Finance and Legal Studies**  
**Eberly College of Business and Information Technology**

**REAL 382 Real Estate Fundamentals** 3c-01-3cr  
Acquaints the student with the language, principles, and laws that govern the business of real estate. Emphasizes the underlying concepts of land, property, rights in realty, and the means, methods, and laws that govern the conveyance of these rights. Required course for taking the Pennsylvania Real Estate Sales Exam.

**REAL 383 Real Estate Practice** 3c-01-3cr  
**Prerequisite:** REAL 382  
One of the two courses required by the Pennsylvania Real Estate Commission in order to take the Pennsylvania Real Estate Sales Licensing Exam. Topics include real estate brokerage, the real estate market, listing contracts, the Pennsylvania Real Estate Licensing and Registration Act and its rules and regulations, appraisal, property management, fair housing laws, ethical practices for real estate professionals, and real estate math.

**RESP: Respiratory Care**  
**Department of Nursing and Allied Health Professions**  
**College of Health and Human Services**

**RESP 101 The Profession of Respiratory Care** 1c-01-1cr  
Introduces the health care environment and specifically the respiratory care profession. Students visit a hospital respiratory care department and observe basic respiratory patient care procedures.

**RESP 326 Respiratory Care Clinical Practice I** var-3cr  
First exposure to patient care. An introduction to and practice of basic respiratory care treatment modalities.

**RESP 327 Pharmacology** 3c-01-3cr  
An introduction to pharmacology and therapeutics. Emphasizes the drugs used in respiratory care. Drug classification, action, usage, dosage, and availability are discussed.

**RESP 328 Introduction to Respiratory Care** 4c-01-4cr  
Topics include medical terminology and an overview of cellular structure and function. Emphasizes neurophysiology, respiratory anatomy, and physiology.

**RESP 329 Respiratory Care Equipment** 4c-01-4cr  
An introduction to respiratory therapy equipment, related procedures and principles, techniques, and theory of mechanical ventilation. Special emphasis is given to oxygen delivery systems and the rationale for their use.

**RESP 330 Cardiopulmonary Resuscitation** 2c-01-2cr  
A comprehensive analysis of the principles and practices of numerous methods of resuscitation.

**RESP 333 Respiratory Care Clinical Practice II** var-3cr  
Treatment procedures introduced in Clinical I are continued with greater emphasis on independence. Specialty rotations are added to broaden exposure to respiratory care and critical care.

**RESP 334 Respiratory Care Instrumentation and Application** 4c-01-4cr  
Provides a comprehensive knowledge of mechanical ventilation. Discusses the care of critically ill and physiologic consequences of mechanical ventilation.

**RESP 335 Patient Care Skills** 3c-01-3cr  
An overview of the history of respiratory care and nursing. Topics include medical records, infection control, sterilization, and psychosocial aspects of illness.

**RESP 336 Cardiopulmonary Evaluation and Clinical Correlation** 4c-01-4cr  
Disease states of the pulmonary and related systems are investigated in progression from etiology through treatment and prognosis.

**RESP 337 Introduction to Pulmonary Function Studies** 1c-01-1cr  
Introduces the basic principles of lung volumes, capacities, and their measurement. Blood gas sampling and electrodes are also explored.

**RESP 342 Preceptorship in Respiratory Care** 1c-01-1cr  
**Prerequisites:** RESP 326, 328, 329, 330, permission  
Provides an opportunity to gain additional clinical experiences in a supervised health care setting. Participants must meet university and sponsoring preceptorship requirements. May be repeated for a maximum of 5cr. A minimum of 40 hours is required for each credit.

**RESP 425 Clinical Case Studies** 3c-01-3cr  
Increases the working knowledge of disease states commonly experienced by patients in the critical care setting. Emphasizes recognition and treatment of various disease states. Explores methods for evaluation and treatment of clinical oxygenation disturbances and acid-base disorders. Clinical simulations, case studies, and patient management problems reviewed and discussed. Emphasizes appropriate information-gathering and decision-making techniques.

**RESP 426 Respiratory Care Clinical Practice III** var-4cr  
Respiratory care treatment procedures are continued with emphasis on improving proficiency and refining skills in adult general and critical care areas. The focus is on advanced skills related to mechanical ventilation. Specialty rotations are continued.

**RESP 428 Essentials of Electrocardiography** 2c-01-2cr  
Acquaints the student with basic principles in cardiac electrodiagnostics. Topics include the technique of ECG testing and fundamentals of ECG arrhythmia recognition.

**RESP 429 Design and Function of a Respiratory Care Program** 2c-01-2cr

Basic management principles as they apply to the hospital setting; in particular, respiratory care departments and schools are discussed.

**RESP 430 Pulmonary Function Studies** 3c-01-3cr

**Prerequisite:** RESP 337

Introduces the advanced diagnostic studies and equipment necessary for diagnosing and quantifying the various lung diseases. Included are advances in invasive studies and rehabilitation evaluation tools.

**RESP 431 Pediatric Respiratory Care** 1c-01-1cr

**Prerequisites:** RESP 334, 336

The application of respiratory care to children ages six months to fifteen years is explored. Cardiopulmonary pathophysiology and treatment for the following disorders are discussed: Croup, Epiglottitis, Asthma, Cystic Fibrosis, Congenital Heart Defects, and Abdominal and Chest Wall Defects.

**RESP 433 Respiratory Care Clinical Practice IV** var-4cr

Respiratory care treatment procedures are continued with emphasis on functioning with greater independence and improving proficiency and refining skills in adult general and critical care areas. Experience in non-acute health care settings is included. Specialty rotations are continued. Provides opportunities to develop leadership skills.

**RESP 434 Neonatal Respiratory Care** 3c-01-3cr

Basic terminology, anatomy, and pathophysiology of obstetric, fetal, neonatal, and pediatric patients are presented.

**RESP 436 Respiratory Care Teaching** 2c-01-2cr

An introduction to respiratory education.

**RESP 437 Methods in Critical Care** 2c-01-2cr

Critical care diagnostic and therapeutic modalities pertinent to respiratory care are discussed. Topics include invasive and noninvasive cardiac monitoring, pulmonary monitoring, neurological assessment, ventilator commitment, and discontinuance.

**RESP 438 Cardiopulmonary Rehabilitation** 1c-01-1cr

Techniques and principles associated with cardiopulmonary rehabilitation programs are surveyed. Topics also include the management of chronic pulmonary disease in the home and the application of respiratory equipment and mechanical ventilators in this setting.

**RESP 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**RGPL: Regional Planning**

**Department of Geography and Regional Planning  
College of Humanities and Social Sciences**

**RGPL 103 Cities of the World: Issues in Planning and Development** 3c-01-3cr

An introduction to the developmental and regional planning issues facing contemporary non-western cities. A theoretical framework sets up detailed case studies of developmental issues affecting urban populations in Africa, Asia, and Central and South America. Issues include such traditional topics as migration, population, poverty, and indigenous and colonial legacies, but environmental and infrastructure problems such as water supply, food security, energy, solid waste, disaster planning, and transportation are also analyzed and discussed. (Also offered as GEOG 103; may not be taken as duplicate credit)

**RGPL 213 Cartography I** 3c-01-3cr

Introduces principles of thematic map construction. Emphasizes techniques of choropleth mapping and the production of scientific graphs and charts. (Also offered as GEOG 213; may not be taken for duplicate credit)

**RGPL 281 Special Topics** 3c-01-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students. (May also be offered as GEOG 281; may not be taken as duplicate credit under same title)

**RGPL 313 Cartography II** 3c-01-3cr

**Prerequisite:** RGPL 213

Gives an understanding of the compilation and use of maps and quantitative data. Develops skills essential to the construction of various types of maps. (Also offered as GEOG 313; may not be taken for duplicate credit)

**RGPL 314 Map and Photograph Interpretation** 3c-01-3cr

Maps and air photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and of associated tools for their use is presented. (Also offered as GEOG 314; may not be taken for duplicate credit)

**RGPL 316 Introduction to Geographic Information Systems** 3c-01-3cr

**Prerequisite:** RGPL 213, or equivalent, or instructor permission  
Automated methods for creating, maintaining, and analyzing spatial data are presented. Topics include 1) specialized GIS hardware and software, 2) vector vs. raster vs. object-oriented spatial data structures, 3) creation and manipulation of geographic data files, 4) database design and management concepts, 5) spatial analysis, and 6) cartographic design. (Also offered as GEOG 316; may not be taken for duplicate credit)

**RGPL 332 Urban Geography** 3c-01-3cr

Basic concepts of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored. (Also offered as GEOG 332; may not be taken for duplicate credit)

**RGPL 333 Trade and Transportation** 3c-01-3cr

Deals with the spatial aspects of transportation systems and their use. Discusses circulation, accessibility, time and distance concepts, and trade patterns. (Also offered as GEOG 333; may not be taken for duplicate credit)

**RGPL 341 Climatology** 3c-01-3cr

Examines the elements of weather and climate on Earth. The location and causes of global climatic regions are examined in relation to moving pressure and wind systems. Also considers the climatic history of the planet and recent human modifications of the atmospheric environment. (Also offered as GEOG 341; may not be taken for duplicate credit)

**RGPL 342 Physiography** 3c-01-3cr

Focuses on landform types and their spatial distribution. Emphasizes the tectonic forces that build landforms and the weathering and erosional processes that erode and shape surface features. The relationship between human activities and landforms is also considered. (Also offered as GEOG 342; may not be taken for duplicate credit)

**RGPL 343 Geography of Fresh Water Resources** 3c-01-3cr

Students learn about surface and groundwater as a resource with unique properties. Fresh water is defined physically by storage in the hydrologic cycle and the values assigned by different cultures. Problems featured relate to consumptive and withdrawal water uses, the problems of water supply and scarcity, water law and its inconsistencies, flooding and floodplain management, sources of contamination and pollution, wetlands, and case studies of selected river basins. (Also offered as GEOG 343; may not be taken for duplicate credit)

**RGPL 345 Biogeography for Environmental Managers** 3c-01-3cr

**Prerequisite:** One of the following: GEOG 341, 342, BIOL 103, 112, 115  
Examines the distribution of plants and animals across the earth's surface, as influenced by natural and human processes. Emphasizes landscape and regional habitat dynamics as they relate to environmental planning and

management. Field trips supplement lectures and readings. (Also offered as GEOG 345; may not be taken for duplicate credit)

**RGPL 350 Introduction to Planning** 3c-01-3cr

An introduction to the profession and activity of contemporary American urban and regional planning. Emphasizes land use control, design, growth management, and development regulation. The legal and institutional bases of planning practice are covered as well.

**RGPL 352 Planning Methods** 3c-01-3cr

Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans.

**RGPL 410 Community Participation and Civic Engagement Seminar** 3c-01-3cr

**Prerequisite:** RGPL 350

Introduces recent participatory planning and civic renewal initiatives within "communities of place" in the United States. Particular attention is directed toward understanding how planners, citizens, community-based organizations, and local institutions engage in the public work of civic creativity, asset mobilization, and community development. Participatory planning techniques and community facilitation tools are discussed and demonstrated. Civic associations in Indiana County and Southwest Pennsylvania are highlighted as cases.

**RGPL 412 Community Planning Practicum** 3c-01-3cr

**Prerequisite:** RGPL 468

This senior seminar and workshop constitute a capstone course that focuses on recent research in the major field. Students carry out an applied research project on a topic of local or regional importance. (Also offered as GEOG 412; may not be taken for duplicate credit) (Titled Research Seminar prior to 2011-12)

**RGPL 415 Remote Sensing** 3c-01-3cr

Deals with air photographs, satellite imagery, thermal sensing, and radar imagery and their application to deriving information about the earth's physical and cultural landscapes. (Also offered as GEOG 415; may not be taken for duplicate credit)

**RGPL 417 Technical Issues in GIS** 3c-01-3cr

**Prerequisite:** RGPL 316

A project-based class in which students learn the skills to develop and maintain a Geographic Information System. Through cooperative learning, they design and implement functional systems. Methods for designing GIS systems to user specification, data collection, data input, project management, and system documentation are covered. (Also offered as GEOG 417; may not be taken for duplicate credit)

**RGPL 421 Regional GIS Management** 3c-01-3cr

**Prerequisite:** RGPL 417 or instructor permission

Principles and methods for creating, operating, maintaining, and managing data for multi-user geospatial information systems are studied. Each student will customize, document, and operate a multi-user geographic information system of his or her design. (Also offered as GEOG 421; may not be taken for duplicate credit)

**RGPL 426 Environmental Land Use Planning** 3c-01-3cr

**Prerequisite:** RGPL 350 recommended

Examines principles, techniques, and applications for the environmental land-use planning process. Focuses on surface water and deals with topics such as land-use, stream monitoring, stream conservation and restoration, and watershed management. Students who complete course will be exposed to environmental planning legislation and policy, best management practices, and applied techniques.

**RGPL 440 Conservation: Environmental Analysis** 3c-01-3cr

Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development. (Also offered as GEOG 440; may not be taken for duplicate credit)

**RGPL 453 Planning Design Studio I** 3c-01-3cr

Introduces professional graphic communications. Emphasizes the use of 2-D Computer Aided Design (CAD) applications, plan graphics, and professional standards to represent and solve basic physical planning problems. (Offered as RGPL 353 prior to 2008-09)

**RGPL 454 Planning Design Studio II** 3c-01-3cr

**Prerequisites:** RGPL 350, 353 or instructor permission

Introduces the activity of design, design programming, design decision making, and design communications. Focuses specifically on the development of site planning, site analysis, and site design skills as well as the translation of design program elements into physical form.

**RGPL 458 Land Use Law** 3c-01-3cr

**Prerequisite:** RGPL 350

Introduces principles of land use law. Focus is on federal constitutional principles and key Supreme Court cases, especially as they relate to actions of local units of government and municipal planning practice. Deals with the present state of land use law and with current trends and issues.

**RGPL 464 Land Use Policy** 3c-01-3cr

**Prerequisite:** RGPL 350

Introduces and provides an overview of land use issues at the regional, state, and federal levels. Emphasizes the evolution of contemporary policy strategies, constitutional issues, and regional controversies involved in the regulation of metropolitan growth, central city decline, and management of public lands. (Also offered as GEOG 464; may not be taken for duplicate credit)

**RGPL 468 Planning Theory** 3c-01-3cr

**Prerequisites:** RGPL 350, 352, 454, or instructor permission

A seminar on contemporary debates concerning planning traditions, principles, and practices. The activity of planning is investigated from several theoretical frames and analytic positions.

**RGPL 481 Special Topics** 3c-01-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students. (May also be offered as GEOG 481; may not be taken for duplicate credit under same title)

**RGPL 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**RGPL 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6cr.

**RGPL 493 Internship** var-1-12cr

A professional learning experience with emphasis on application of academic background. Open to majors and minors in regional planning with a total of 60cr and 15cr in the major. See internship supervisor for additional information.

**RLST: Religious Studies**

**Department of Religious Studies**

**College of Humanities and Social Sciences**

**RLST 100 Introduction to Religion** 3c-01-3cr

An introduction to the academic study of religion through an examination of various dimensions of religious expression and traditions. Covers such

areas as problems about definition of religion; approaches to the study of religion; the goals, language, and rituals of religion; cases of religious experience; faith, disbelief, and alternatives to religion; religion and the sociocultural context.

**RLST 110 World Religions** 3c-01-3cr

A comparative study of the history, teaching, and rituals of the major religions of the world and their influence on contemporary society. A nonsectarian approach to religions such as Native American religion, Afro-American religion, Judaism, Christianity, and Islam in relationship to Hinduism, Buddhism, Confucianism, Taoism, and Shinto.

**RLST 114 Biblical Hebrew I** 3c-01-3cr

Enables students to read the prose of Biblical Hebrew or Classical Hebrew—that is, the major language in which the Hebrew Bible/Old Testament was written during the first millennium B.C.E. By learning the fundamentals of Biblical Hebrew grammar and vocabulary, students thus acquire the tools and skill to do translation of this important ancient text for themselves. (Also offered as CRLG 114; may not be taken for duplicate credit)

**RLST 164 Biblical Hebrew II** 3c-01-3cr

**Prerequisite:** RLST/CRLG 114

A continuation of Biblical Hebrew I with the same objective: to enable students to read the prose of Biblical Hebrew or Classical Hebrew. By learning the fundamentals of Biblical Hebrew grammar and vocabulary, students thus acquire the tools and skill to do translation of this important ancient text for themselves. (Also offered as CRLG 164; may not be taken for duplicate credit)

**RLST 200 Religion and Culture: Their Interaction** 3c-01-3cr

A systematic study of the interaction of religions and various components of culture, as a way of understanding the phenomenon of religion. The approach is functional and descriptive; it uses case studies which are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

**RLST 210 World Scriptures** 3c-01-3cr

Major sacred writings of Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions are studied from point of view of their religious significance.

**RLST 220 Buddhist Thought and Practice** 3c-01-3cr

Explores the history, teachings, and practices of the main schools of Buddhism. Considers the tradition both as it has developed in Asia as well as its modifications as it has been introduced into Western societies.

**RLST 245 Women and Religion** 3c-01-3cr

**Prerequisite:** RLST 110 or instructor permission

Examines women's roles and experiences within some of the world's major religious traditions, both past and present. In exploring patterns and instances of the empowerment and oppression of women, the course pays careful attention to feminist critiques.

**RLST 250 Understanding the Bible** 3c-01-3cr

An introduction to scholarly methods and major themes necessary to understand the Hebrew Scriptures and the New Testaments of the Judeo-Christian tradition.

**RLST 260 American Religious Development** 3c-01-3cr

A survey and analysis of topics which depict the role of religion in the U.S., e.g., American Indian religion; religion and the discovery/colonization/immigration trends of the U.S.; religion and the Constitution; indigenous religious movements; black religion; ecumenism; atheism; cults; mass media and religion; religion in Indiana County.

**RLST 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**RLST 290 Christianity** 3c-01-3cr

A study of the beliefs, practices, significant persons, history, and cultural impact of Christianity.

**RLST 311 Eastern Philosophy** 3c-01-3cr

An examination and critique of the philosophies which have shaped Eastern world views and ways of life as found in a representative sampling of Chinese, Japanese, and Indian thought.

**RLST 312 Archaeology and the Bible** 3c-01-3cr

An investigation of religious-historical traditions of the Bible in light of archaeological research. Includes a study of archaeological method and interpretation, discoveries in Egypt, Mesopotamia, and Syro-Palestine as background for understanding the traditions and religious practices and beliefs of Israel, and special questions surrounding the Patriarchal narratives, the Exodus and Conquest, Israel under David and Solomon, the Dead Sea Scrolls, and New Testament times.

**RLST 329 Philosophy of Religion** 3c-01-3cr

A philosophical critical examination of religion to include: the nature of religion; religious argumentation; existence and nature of God; meaning and relation of faith and knowledge; theories of origin or religion.

**RLST 345 Women in the Bible** 3c-01-3cr

**Prerequisite:** One RLST or WMST course or instructor permission  
Surveys and examines the stories and issues concerning women in the Bible and introduces the questions and methods of research that the contemporary world and feminist biblical scholars bring to them.

**RLST 360 African Religions** 3c-01-3cr

An examination of the nature of African traditional religion and how traditional religion, Islam, and Christianity coexist and influence one another.

**RLST 365 Native North American Religions** 3c-01-3cr

An introduction to the indigenous religions of North America and to the peoples who practice these rich and varied approaches to the sacred. Not only examines major religious themes and dimensions (myth, ritual, ethics, etc.) but includes a historical perspective on North American Indian life-ways. This perspective involves discussion of the clash with Euro-American values and contemporary native religious responses to social crisis and change.

**RLST 370 Religions of China and Japan** 3c-01-3cr

A study of Confucianism, Taoism, Buddhism, Shinto, and popular religion in China and Japan, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

**RLST 373 Advanced Studies in Buddhism** 3c-01-3cr

**Prerequisite:** RLST 110 or 210 or 220 or instructor permission

Explores in depth a particular aspect of the history, teachings, or practices of Buddhism. In certain semesters, focuses on how the tradition has evolved in a particular country, such as India, Sri Lanka, Thailand, Tibet, China, or Japan. In other semesters, explores the development of one particular school of the tradition, such as Pure Land or Zen Buddhism. Yet other semesters will consider a specific topic, such as Buddhist scriptures, ethics, or ritual.

**RLST 375 Religions of India** 3c-01-3cr

A study of Hinduism, Indian Buddhism, Jainism, and Sikhism, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

**RLST 380 Islam** 3c-01-3cr

A study of Islam including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

**RLST 410 Early Christian Thought** 3c-01-3cr

The development of Christian thought approached through an in-depth study of selected writings from the early Church Fathers to the Protestant Reformers.



**RLST 440 Modern Christian Thought** 3c-01-3cr  
An examination of Christian thought, approached through in-depth study of selected writings from major theologians of the nineteenth and twentieth centuries.

**RLST 480 Seminar in Religious Studies** 3c-01-3cr  
**Prerequisite:** RLST students or instructor permission  
An advanced forum for detailed exploration of a single topic or single author, subject to instructor's choice. Enrollment limited to RLST majors and other students by invitation or permission.

**RLST 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**RLST 482 Independent Study** var-1-6cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
Individual students wishing to pursue religious studies interests not covered in the department's regular offering may do so by approval. Upon approval, students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to maximum of 6cr. (This option is available to both RLST majors and nonmajors.)

**RLST 482 Independent Study: Honors** 3c-01-3cr  
**Prerequisites:** 3.00 GPA, 15cr in RLST, and 3.20 GPA in departmental courses  
Majors in RLST are invited to take 3cr of independent study-designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.

**RLST 483 Honors Thesis** var-1-6cr  
**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**RLST 485 Selected Topics in Feminist Studies of Religion** 3c-01-3cr  
**Prerequisite:** One RLST or WMST course or instructor permission  
Offers rotating topics in feminist studies in religion by alternating professors in the Department of Religious Studies. Such topics may include: "Contemporary Feminist Spirituality Movements," "Goddesses in the Ancient Near East," "Feminist Biblical Scholars and Theologians," and "Women in Buddhism."

**RLST 493 Internship in Religious Studies** 6-12cr  
**Prerequisites:** Junior or senior; RLST major or double major; 2.5 GPA in major; department approval  
A supervised experience in a public or private organization which extends and complements coursework in Religious Studies.

**SAFE: Safety Sciences**  
**Department of Safety Sciences**  
**College of Health and Human Services**

**SAFE 100 Workplace Safety Today and Tomorrow** 3c-01-3cr  
**Prerequisite:** Non-SAFE major  
Introduces workplace safety, health, and environmental aspects to the students with limited knowledge of the subject. Includes the historical development of safety and health regulations, the impact of injury on society, identifying and evaluating hazards, and hazard controls in specific industrial processes, basic principles of loss management, and the future of safety, health, and environmental regulations.

**SAFE 101 Introduction to Occupational Safety and Health** 3c-01-3cr  
Introduces the evolution of the safety profession through study of historical events and the changes that resulted. Students gain an understanding of the key components of the profession such as OSHA and workers' compensation, accident investigation, occupational health hazards, emergency response, product liability, ergonomics, fleet safety, ethics, and measuring safety program success. Case studies and small group activities prepare students for further in-depth study of these topics and to fulfill their roles as professionals.

**SAFE 102 Introduction to Mine Safety and Health** 3c-01-3cr  
Provides an in-depth background of the problems involving mine safety. A historical approach to coal and mineral mining is reviewed; legislative influences such as the Federal Coal Mine Health and Safety Act, the Metal and Nonmetal Mine Health and Safety Act, and the Occupational Safety and Health Act are discussed in depth; mining techniques, methods, and systems are discussed. Presents management of mine health and safety programs. Covers federally mandated training of employees. Offered occasionally.

**SAFE 111 Principles of Safety I—General Industry** 3c-01-3cr  
Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA-promulgated general industry standards and various consensus standards. Emphasis given to plant layout and design, powered industrial vehicles, boilers and unfired pressure vessels, working and walking surfaces, machine guarding, and an introduction to industrial processes.

**SAFE 211 Principles of Safety II—Construction Industry** 3c-31-4cr  
**Prerequisite:** SAFE 101  
Stresses an understanding of the complexity of the construction industry and the hazards common to construction. Focuses on the recognition, evaluation, and control of these hazards with an emphasis on welding and cutting, fall prevention, confined space, materials handling, electrical safe work practices, scaffolding, and trenching. The application of hazard control strategies is accomplished in laboratory sessions.

**SAFE 212 Hazard Prevention Management I** 3c-01-3cr  
**Prerequisite:** SAFE 101  
Teaches the fundamental concepts involved in the management of safety programs. Basic safety management terminology, safety professional code of ethics, fleet safety, and product safety are discussed. The class also discusses risk management and worker's compensation, as well as workplace violence.

**SAFE 220 Hazardous Materials** 3c-01-3cr  
**Prerequisite:** CHEM 101, SAFE 101 or instructor permission  
Provides a basic understanding of the storage, transportation, and use of hazardous materials in business. Includes a discussion on hazardous materials, specifically their definitions, categories, regulations, and evaluation. Emergency response planning is also covered.

**SAFE 231 Principles of Mine Safety I** 3c-01-3cr  
**Prerequisite:** SAFE 102  
Focuses on the various aspects of mining operations such as slope and shaft development; mine design; ground control; hoisting; man-trips; haulage; mining equipment; mine emergency planning and procedures; mine communications and maintenance. Offered occasionally.

**SAFE 232 Principles of Mine Safety II** 3c-01-3cr  
**Prerequisite:** SAFE 102  
Covers surface mining operations such as slope stability, equipment, ground water, and control. Discusses mine-related processing operations. Provides an in-depth study of the various controls of electrical hazards and ignition sources such as permissible equipment and electrical distribution systems. Discusses the uses of explosives and blasting practices, handling, storing, and transportation with emphasis on causes of explosion involving dust and gases. Offered occasionally.

**SAFE 245 Product Safety** 3c-01-3cr  
**Prerequisite:** MATH 217

Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Become familiarized with the evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards, and product testing.

**SAFE 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SAFE 299 Experience in Cooperative Education I** 0c-01-0cr

**Prerequisites:** GPA of 2.0 or better, SAFE 101, 111; approval of academic advisor, co-op coordinator, and department chairperson  
Provides the initial experience in a program designed to combine classroom theory with practical application through job-related experiences. Open to SAFE majors and minors in their sophomore year. Students are employed by organizations where there is an ongoing hazard control program under the direction of an experienced safety professional.

**SAFE 311 Fire Protection** 2c-31-3cr

**Prerequisite:** CHEM 101 or instructor permission  
Provides the fundamental concepts involved in the protection of people and property from fire and explosion. Basic fire safety terminology, fire chemistry and extinguishment, fire safety references and standards, and fire program management are discussed. Also discusses control measures for common fire and explosion hazards and the design of buildings in terms of life safety and fire suppression systems. Development of programs in fire safety, as well as the evaluation and control of fire and explosion hazards, is studied in laboratory sessions. Practical application of fire principles is completed in laboratory sessions.

**SAFE 330 Recognition, Evaluation, and Control of Occupational Health Hazards I** 3c-31-4cr

**Prerequisites:** BIOL 155, CHEM 101 or instructor permission  
Provides an understanding of selected chemical stressors in the workplace that may present occupational health hazards to workers. Students learn to anticipate, identify, evaluate, and control chemical stressors including dusts, mists, metal fumes, airborne fibers, inorganic and organic gases and vapors, and oxygen-deficient atmospheres. Hazard classification systems, adverse health effects from excessive exposures, workplace standards, sampling and analytical methods, and control options are emphasized.

**SAFE 345 Systems Safety Analysis** 3c-01-3cr

**Prerequisite:** MATH 105 or instructor permission  
Focuses on the evaluation of system designs using detailed system analysis techniques. Topics include system definition, economics of systems safety, systems safety methodology, and mathematics of systems analysis, including statistical methods, Boolean algebra, and reliability. Skills gained include the ability to perform system hazard analyses and operating and support hazard analyses. Techniques include failure mode and effect analysis, fault tree analysis, and technique for human error rate prediction. Practical analysis work is accomplished through in-class discussion, demonstration sessions, and homework assignments.

**SAFE 347 Ergonomics** 2c-31-3cr

**Prerequisite:** SAFE 211 or instructor permission  
Explores the principles which control human performance and its effect upon the safety and reliability of systems. Engineering anthropometrics, human perception, biomechanics of motion and work posture, work physiology, and human performance measurement are taught in the context of their application in workplace design. Instructs in methodologies for analysis of tasks and human performance requirements. Important human limitations and ergonomic hazard evaluations, such as lifting and repetitive motion tasks, are studied in laboratory sessions.

**SAFE 399 Experience in Cooperative Education II** 0c-01-0cr

**Prerequisites:** SAFE 299, GPA of 2.0 or better

Represents the second experience in a program designed to combine classroom theory with practical application through job-related experiences. Open to SAFE majors and minors before completing the required Safety Sciences internship or achieving senior status for minors. Students are employed by organizations where there is an ongoing hazard control program under the direction of an experienced safety professional.

**SAFE 401 Mine Ventilation** 2c-31-3cr

**Prerequisites:** MATH 122, PHYS 112, SAFE 102, or consent  
A study of mine ventilation principles and practices which provide a basic knowledge in design and operation of mine ventilation systems. Topics of airflow physics, ventilation standards, fan fundamentals, pressure losses, required air flows, and overall design are discussed. Specific problems in mine ventilation are solved. Offered occasionally.

**SAFE 410 Environmental Safety and Health Regulations** 3c-01-3cr

**Prerequisite:** CHEM 101 or instructor permission  
Provides a working knowledge of federal environmental legislation and their practical application in the work environment. Environmental laws covered include the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and other related environmental laws.

**SAFE 412 Hazard Prevention Management II** 2c-31-3cr

**Prerequisite:** SAFE 212  
Teaches a systems-based approach to managing safety programs, hazards, and risk. An emphasis is placed on understanding proactive approaches to conducting pre-hazard and life-cycle safety analyses of activities/operations and developing safety system documentation (e.g., policies, objectives, goals, performance measures, plans, committee charters, safety procedures, work procedures, audit plans, and accident investigation reports).

**SAFE 420 Law and Ethics in the Safety Profession** 3c-01-3cr

**Prerequisite:** Junior standing  
Examines ethical and legal issues that present themselves to practicing safety professionals. Students identify and evaluate these issues in terms of their own value system, as well as legal and prudent practice within the safety, health, and environmental profession. Specific reference is made to participation of the safety professional in workers' compensation cases, Occupational Safety and Health Review Commission hearings, class action suits, and trials by jury.

**SAFE 430 Recognition, Evaluation, and Control of Occupational Health Hazards II** 3c-31-4cr

**Prerequisites:** BIOL 155, PHYS 111 or instructor permission  
Provides an understanding of selected physical and biological stressors in the workplace that may present occupational health hazards to workers. Students learn to anticipate, identify, evaluate, and control physical and biological stressors in the workplace. Emphasizes adverse health effects from excessive exposures, workplace standards, sampling and analytical methods, and control options. Concludes with discussions that focus on the effective development and implementation of a comprehensive safety and health program.

**SAFE 441 Accident Investigation** 3c-01-3cr

**Prerequisites:** SAFE 101, junior standing or consent  
Focuses on various aspects of accident investigation such as recent theories associated with accident causes, investigative techniques, data acquisition, structure of investigative reports, management responsibilities, and remedial actions. Particular emphasis on determining sequence of events to develop management actions which prevent recurrence of accidents.

**SAFE 442 Current Issues in Safety** 3c-01-3cr

**Prerequisite:** SAFE 211 or permission  
Examines the emerging issues currently faced by the environmental, safety, and health (ESH) practitioner that extend beyond the conventional areas of academic preparation. In addition, explores certification, ethics, compliance issues, quality management, worldwide concerns, and other common issues. Each student researches and presents information on specific item of current relevance in the safety profession.

<b>SAFE 443 Construction Safety</b>	<b>3c-01-3cr</b>	Student conducts a practicum at an approved occupational setting. Student is required to complete four major projects which will be developed in collaboration between the faculty supervisor and the internship supervisor. Student is accountable to an on-site supervisor and required to remain in close contact with a Safety Sciences faculty coordinator.
<b>Prerequisites:</b> SAFE 211, junior standing or permission		
Provides an in-depth coverage of hazard recognition, evaluation, and control principles for the variety of phases of construction. Information regarding the development of a construction safety program along with extensive coverage of federal standards related to the construction industry is also provided.		
<b>SAFE 461 Air Pollution</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> SAFE 410 or permission		
Focuses on major aspects of the air pollution problem. Includes sources of pollution, evaluation and engineering of pollutants, government regulations, atmospheric chemistry and dispersion, and human and nonhuman effects. Particular emphasis on information that is practical for the safety management, industrial health, or environmental health professional.		
<b>SAFE 462 Radiological Health</b>	<b>3c-01-3cr</b>	
A study of problems associated with ionizing radiation in human environment. Emphasizes biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.		
<b>SAFE 465 Right-to-Know Legislation</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> SAFE 301, 311, or instructor permission		
Covers both the federal and selected state right-to-know laws and related legislation. Discusses the scope, application, and enforcement of the various laws, including specific legal and moral obligations. Strategies are explored and developed to identify the means by which employers can gain compliance with regulatory requirements.		
<b>SAFE 470 Fleet Safety</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> SAFE 220 and junior standing		
Includes topics involved with the development and operation of fleet safety programs: driver selection and training, accident investigation and record-keeping, equipment safety features, preventative maintenance, and driver incentive programs. Although all modes of transportation will initially be discussed, the focus is on motor fleet operations. (Offered as SAFE 370 prior to 2007-08)		
<b>SAFE 472 Process Safety in the Chemical Industry</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> SAFE 301, 311, 345, and senior standing, or instructor permission		
Covers all important aspects of loss prevention as it is practiced in the chemical process industries. Prepares the safety professional so that he/she may be able to work more effectively with chemists and chemical engineers in joint hazard identification, evaluation, and control projects.		
<b>SAFE 480 Healthcare Safety Management</b>	<b>3c-01-3cr</b>	
<b>Prerequisite:</b> Junior standing		
An investigation into the safety and environmental health issues encountered in a healthcare environment. The focus is on hospital safety. However, healthcare facilities in general will also be touched upon (e.g., nursing homes, outpatient facilities, clinics, etc.). (Offered as SAFE 380 Institutional Safety Management prior to 2008-09)		
<b>SAFE 481 Special Topics</b>	<b>var-1-3cr</b>	
<b>Prerequisite:</b> As appropriate to course content		
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.		
<b>SAFE 482 Independent Study</b>	<b>var-1-3cr</b>	
<b>Prerequisite:</b> Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office		
Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.		
<b>SAFE 488 Internship</b>	<b>12cr</b>	
<b>Prerequisites:</b> Senior standing, all required courses in major, minimum 3.0 cumulative GPA and 3.2 GPA in major, and departmental consent		
<b>SAFE 493 Internship</b>	<b>var 1-6cr</b>	
<b>Prerequisites:</b> Senior standing, all required courses in major		
Applies hazard assessment and management practices to actual workplace safety issues, which requires the student to visit workplace sites. A two-hour weekly debriefing session involves the students in developing their written and oral communication skills. All SAFE students are required to take an internship, either SAFE 488 or SAFE 493.		
<b>SCI: Science</b>		
<b>College of Natural Sciences and Mathematics</b>		
<b>SCI 101 Fundamentals of Physics</b>	<b>2c-21-2.5cr</b>	
<b>Prerequisite:</b> ELED major or instructor permission		
A conceptual course in physics for ELED majors. High school physics is not a prerequisite. Class and lab presentations concentrate upon dispelling naive concepts and developing a better understanding and appreciation of the physical world. The topics of motion, heat, light, sound, electricity, magnetism, and the nucleus are presented in context with everyday experiences. Does not fulfill the Liberal Studies requirement except for majors in ELED and ECED/PreK-Grade 6.		
<b>SCI 102 Fundamentals of Chemistry</b>	<b>2c-21-2.5cr</b>	
<b>Prerequisite:</b> ELED major or instructor permission		
A survey of chemical principles and concepts. The nature of chemical reactions as applied to technology and their applications to society. The world of consumer chemistry is explored. The goal is to develop a chemical literacy for the student. A series of laboratory exercises develops concept understanding and process skills. Includes some individual and group projects. Does not fulfill the Liberal Studies requirement except for majors in ELED and ECED/PreK-Grade 6.		
<b>SCI 103 Fundamentals of Earth and Space Science</b>	<b>2c-21-2.5cr</b>	
<b>Prerequisites:</b> SCI 101, 102		
An introduction to geology, astronomy, oceanography, and meteorology for ELED majors. Emphasizes the understanding of large-scale processes and how the earth, solar system, and universe work. Lab experiences include hands-on work with earth materials and with instruments from subjects, maps, and field trips, which may occur during class times, nights, and weekends. Does not fulfill the Liberal Studies requirement except for majors in ELED and ECED/PreK-Grade 6.		
<b>SCI 104 Fundamentals of Environmental Biology</b>	<b>2c-21-2.5cr</b>	
<b>Prerequisites:</b> SCI 101, 102		
A basic introduction to the major concepts and principles of ecology and their application to modern living for majors in ELED and ECED/PreK-Grade 6.		
<b>SCI 105 Physical Science I</b>	<b>3c-21-4cr</b>	
A descriptive and conceptual course in physics for the non-Science major. High school physics is not a prerequisite. Content is designed to develop an understanding and appreciation of the physical world around us, to produce changes in attitude and background essential for our modern society, and to clarify the following topics: motion, heat, sound, light, electricity, magnetism, and the structure of matter.		
<b>SCI 106 Physical Science II</b>	<b>3c-21-4cr</b>	
A basic course in environmental and consumer chemistry for the non-Science major. High school chemistry is not a prerequisite. Major topics include humankind's use and abuse of soil, water, air, and energy resources, global food production and hunger, the nuclear industry, and the threat of nuclear war. Consumer topics include vitamins and nutrition, food additives, pesticides, and drugs.		
<b>SCI 201 Great Ideas in Science</b>	<b>3c-01-3cr</b>	
<b>Prerequisites:</b> No majors in PHYS, CHEM, GEOS, BIOL, BIOC or NASC		

Introduces the great ideas in the fields of Physics, Chemistry, Geoscience, and Biology at a level designed to deepen students' understanding of the natural world around them and allow them to address intelligently those public issues that are based on science.

**SCI 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SCI 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**SCI 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**Science for Disaster Response (SDR)**

**College of Natural Sciences and Mathematics**

**SDR 111 Basic Biological Laboratory Operations** 3c-3l-5cr

**Prerequisites:** BIOL 111 or equivalent and instructor permission and local, state, or federal agency/organization authorization

Level 1 biology describes the characteristics of living organisms and the different levels of biological safety as it applies to microbiology and recombinant DNA laboratories; differentiating between atoms, molecules, elements, and compounds and their importance in biologic systems. Macromolecules and energy generation are discussed. Genetics and biotechnology and the role they play in WMD are extensively studied.

**SDR 121 Chemical Recognition and Identification Techniques** 3c-4l-5cr

**Prerequisites:** CHEM 113 and 114 or equivalent and instructor permission and local, state, or federal agency/organization authorization

Level 1 chemistry focuses on atomic structure, periodic properties, chemical bonding, chemical structure, molecular forces, types of chemical reactions, stoichiometry, chemical kinetics, chemical equilibria, and acids and bases in relation to CBRN identification and analysis. Laboratory exercises focus on techniques to aid CBRN identification and analysis.

**SDR 131 Principles of Radiation** 2c-2l-3cr

**Prerequisites:** PHYS 111, 112, 121, and 122 or equivalent and instructor permission and local, state, or federal agency/organization authorization

Level 1 nuclear physics focuses on nuclear radiation basics; radioactivity; radiation measurements, and sources of nuclear radiation in relation to CBRN materials identification and analysis. Laboratory exercises focus on techniques to aid CBRN materials identification and analysis.

**SDR 211 Interaction of CBRN Materials with Biological Systems and PCR Technology** 3c-3l-5cr

**Prerequisites:** SDR 111 and instructor permission and local, state, or federal agency/organization authorization

Level 2 biology provides intermediate-level first responders with the knowledge, skills, and practical capabilities to effectively identify bacteria, viruses, toxins, and potential genetically modified pathogens which might be used as biological weapons against military forces or civilian communities. Lecture presentations bring together a variety of subjects intimately linked to the advancement of molecular genetics. Integrates advanced safety techniques in handling microbes with basic principles and facts of microbiology, microscopy, and microbe identification using both molecular biological and immunological techniques. A large section features an in-depth discussion of principles and application of polymerase chain reaction.

Hands-on training is a primary goal and is complemented by formal lectures.

**SDR 221 Chemistry of Precursor Compounds** 3c-4l-5cr

**Prerequisites:** SDR 121; instructor permission and local, state, or federal agency/organization authorization

Level 2 chemistry lays the foundation for understanding the modes of action and preparation of various chemical agents. Topics include the basic organic chemistry of the alkanes, alkenes, alkynes, alcohols, and aromatics (the major TICs and TIMs); free radical chemistry; explosives; the vesicants and lachrymators; and stereochemistry. Laboratory exercises include synthetic techniques to aid the student in quick identification of clandestine drug activities or agent synthesis.

**SDR 231 Hazards of Ionizing Radiation** 2c-2l-3cr

**Prerequisites:** SDR 131; instructor permission and local, state, or federal agency/organization authorization

Level 2 nuclear physics provides intermediate-level first responders with the knowledge, skills, and abilities necessary to assess the radiation hazards at an incident site that involves the radiological or nuclear weapons of mass destruction. Lecture presentation topics include internal and external radiation hazards; the units and quantities used to measure the radiation effects on humans, including radiation dose calculations; the effects of radiation on various parts of the body; the Nuclear Regulatory Commission dose standards; and the methods used to protect individuals from the harmful effects of radiation and contamination. A practical exercise is used to emphasize the techniques necessary to estimate the dose received from various radiation sources by measuring the radiation exposure with survey meters and detectors.

**SDR 311 Structure of DNA, RNA, and Cell Morphology** 3c-3l-5cr

**Prerequisites:** SDR 211, CHEM 113, 114 or equivalent, and instructor permission and local, state, or federal agency/organization authorization

Level 3 biology provides apprentice-level laboratory technicians with the knowledge and laboratory skills necessary to work in a biological safety laboratory. Focuses on the basic understanding of fundamental microbiology, staining procedures, and microscopic identification of potential biological agents. Explores the possible role of microorganisms in bioterrorism. An emphasis is placed on host-parasite interactions and the human immune system. Emphasis in laboratory classes in microbiology is on aseptic techniques and safe handling of biological agents. Laboratories in eukaryotic gene expression, cloning of sheep DNA, and PCR technology provide the opportunity to gain knowledge of how genes could be modified and genetically manipulated in clandestine laboratories to produce potential bioterroristic agents.

**SDR 321 Organic Chemistry of WMD, TICs, and TIMs** 3c-4l-5cr

**Prerequisites:** SDR 221 and instructor permission and local, state, or federal agency/organization authorization

Level 3 chemistry focuses on aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, and amines as they pertain to weapons of mass destruction. The nomenclature, preparations, and reactions of these classes of organic compounds are presented. Additional topics include organophosphorous chemistry for the synthesis of nerve agents, precursors and hazards involved with the synthesis of drugs in clandestine laboratories, and the terminology of mass spectrometry. Practical exercises include basic wet chemistry techniques for identification of unknown aldehydes and ketones, basic separation techniques, and a synthetic technique that is similar to what is used in a clandestine drug lab.

**SDR 331 Interaction of Ionizing Radiation** 2c-2l-3cr

**Prerequisites:** SDR 231 and instructor permission and local, state, or federal agency/organization authorization

Level 3 nuclear physics provides apprentice-level first responders with the knowledge, skills, and abilities necessary to identify the radiation hazards at an incident site that involves the radiological or nuclear weapons of mass destruction. Focuses on radiation detection and provides students with the ability to conduct the sampling, evaluation, detection, projection, and control of radiological hazards. Gamma ray spectroscopy systems are used in data acquisition and analysis in the laboratory.

**SDR 486 Selected Topics in SDR** **var-1-6 cr****Prerequisite:** Instructor permission and local, state, or federal agency/organization authorization

Lecture-laboratory course for first responders in the WMD community and related emergency planners. Topics are related to the most recent advances in chemical, biological, radiological, and nuclear (CBRN) detection, identification, analysis, and mitigation. Topics and instructors may be the same or vary.

**SOC: Sociology****Department of Sociology****College of Humanities and Social Sciences****SOC 151 Principles of Sociology** **3c-01-3cr**

A scientific study of structure and functioning of human societies, with special attention to factors responsible for the organization and transformation of sociocultural systems. Specific course content varies from one instructor to another.

**SOC 231 Contemporary Social Problems** **3c-01-3cr**

An exploration of some pressing problems currently endemic to Western society. Problems are defined and solutions explored in light of historical, political, economic, social, and anthropological data.

**SOC 233 Language and Culture** **3c-01-3cr**

Focuses on social and cultural functions of language. Particular emphasis on analysis of non-Western languages.

**SOC 251 Sociology of Human Sexuality** **3c-01-3cr**

An in-depth analysis of a formerly taboo topic, human sexuality. Current information from biological, psychological, and sociological research on human relationships is presented to provide a foundation for self-understanding and societal values.

**SOC 269 Sociology of Deviance** **3c-01-3cr****Prerequisite:** SOC 151 or instructor permission

An overview of the sociological study of deviance. Begins with examining the nature and meaning of deviance or how society creates deviance as social and legal constructions and identifies specific human behaviors as types or forms of deviance. Also examines the major theories or multi-causal explanations of why such deviance occurs. Further describes how society, especially its social institutions and agents, attempts to control or suppress such deviance. Social policy implications of such societal reactions are also considered.

**SOC 271 Cultural Area Studies: Africa** **3c-01-3cr**

Explores the cultural diversity of the continent of Africa. The first unit examines the historical processes which shape modern society, including the formation of indigenous African empires, the evidence for trade routes, slave trading, and colonialism. The second unit examines the nature of African traditional societies, including analyses of forager and agricultural groups. The last unit covers issues of contemporary development in Africa such as famine and agricultural policy, the status of women in economic development, and apartheid. Reading includes ethnographic and historical accounts of African society as well as selections by African writers on the issues of contemporary society. (Also offered as ANTH 271; may not be taken for duplicate credit)

**SOC 272 Cultural Area Studies: China** **3c-01-3cr**

Assists in developing an understanding of contemporary China. While the course begins with prehistoric and historic aspects of China, the focus is on contemporary issues presented in the context of sociological theory. Specific Chinese cultural components are investigated, including values, attitudes, norms, social organization, linguistics, and folklore. (Also offered as ANTH 272; may not be taken for duplicate credit)

**SOC 273 Cultural Area Studies: Southeast Asia** **3c-01-3cr**

An introduction to the peoples and cultures of Southeast Asia. Prehistory and the development of indigenous states in Southeast Asia and analysis of impact of world religions, such as Islam, and Western colonialism. Also examines modern hunter-gatherer and farming societies and discusses contemporary issues in social and economic change, including the "Green

Revolution," tropical deforestation, the struggle of ethnic minority tribal peoples, and the plight of Indochinese refugees. (Also offered as ANTH 273; may not be taken for duplicate credit)

**SOC 274 Cultural Area Studies: Latin America** **3c-01-3cr**

An introduction to the peoples and cultures of Latin America. Focuses on the prehistory and development of pre-Columbian complex societies in Mesoamerica and the Andes and analyzes the impact of European colonialism on these major regions. Also examines contemporary issues, such as civil wars, economic development, rural-urban migrations, and migration and immigration of Latin American peoples into the United States. (Also offered as ANTH 274; may not be taken for duplicate credit)

**SOC 281 Special Topics** **var-1-3cr****Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**SOC 286 Marriage, Kinship, and the Family** **3c-01-3cr**

Sociological and anthropological study of patterns of marriage, kinship, and family life, with emphasis on the relationship between family patterns and other social institutions. Topics include the family and marriage in historical and comparative perspective; worldwide patterns of gender stratification; incest and incest avoidance; class and race contexts of family patterns; mate selection and love; parenthood and child rearing; domestic and sexual violence; alternative family lifestyles; and the current crisis and possible future of the family. Intended for a broad audience but also open to SOC and ANTH majors and minors. (Also offered as ANTH 286; may not be taken for duplicate credit)

**SOC 314 Native Americans** **3c-01-3cr**

A survey of culture history and culture area characteristics of Native Americans of North America. A detailed study of representative groups related to historical, functional, and ecological concepts.

**SOC 320 Sociological Theory** **3c-01-3cr****Prerequisites:** SOC 151; second-semester sophomore standing

A detailed survey of the historical development of sociological theory from the mid-nineteenth century to the present. Treats the classical theorists Marx, Durkheim, and Weber and such contemporary theoretical schools as functionalism, Marxian and Weberian conflict theory, cultural materialism, social evolutionism, rational choice theory, symbolic interactionism, ethnomethodology, sociobiology, structuralism, and postmodernism. Students are encouraged to take this course in the second semester of their sophomore year or during their junior year.

**SOC 333 Delinquency and Youth** **3c-01-3cr****Prerequisite:** SOC 151

A study of social and cultural factors involved in various youth lifestyles, including delinquency. Cross-cultural and historical approach used in a review of social norms, social control, and socialization institutions and community-based programs for rehabilitation.

**SOC 335 Alcohol and Drug Abuse** **3c-01-3cr****Prerequisite:** SOC 151

Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances are considered, and the causes of substance abuse as well as alternatives are examined.

**SOC 336 Sociology of the Family** **3c-01-3cr****Prerequisite:** SOC 151

A sociological study of the family from various theoretical viewpoints. Special emphasis is on the contemporary American family. Covers a variety of topics, such as mate selection, power relationships and roles in the family, parent-child interaction, marital satisfaction, divorce, and others.

**SOC 337 World Societies and World Systems** **3c-01-3cr****Prerequisite:** One of the following: ANTH 110, ECON 101 or 121, GEOG 230, HIST 202, PLSC 101 or 282, SOC 151

A detailed analysis of the evolution of human societies, with special emphasis on the modern world system of societies that began to emerge in the

sixteenth century and that has since expanded to include the entire globe. Topics include societies during the preindustrial era; the emergence of modern capitalism in the sixteenth century; relations between developed and less-developed societies in the modern world; the ascent and decline of nation-states in the modern world; the current plight of the Third World; the rise and demise of socialism in the twentieth century; and various scenarios for the human future.

**SOC 340 Sociology of Industry** 3c-01-3cr  
**Prerequisite:** SOC 151

An examination of industrial organizations and their environments. Production systems analyzed in terms of different forms of organization, e.g., bureaucratic, power-equilibrium, and worker-participation. Special attention paid to who defines production, how such definitions are legitimized, and how constraints are placed on such definitions by union and other political organizations.

**SOC 341 Sociology of Education** 3c-01-3cr  
**Prerequisite:** SOC 151

Examines the place of education in society. Special attention is given to the development of education in America and its relation to political and economic phenomena. Some attention is given to education in other industrial and agrarian societies.

**SOC 342 Social and Cultural Aspects of Health and Medicine** 3c-01-3cr  
**Prerequisite:** 6cr in SOC or ANTH

A review of the fields of medical sociology and anthropology. Focuses on such topics as health and illness in cross-cultural context, aging, social and psychological aspects of pain, and social organization of health facilities and services. Definitions of limits of "life" and "death" in context of holistic health.

**SOC 345 Interpersonal Dynamics** 3c-01-3cr  
**Prerequisite:** SOC 151

A study of the interaction between and among individuals and groups in various social settings. Emphasizes self-understanding, small groups, socialization, social influence and compliance, person perception, collective behavior, and mass communication.

**SOC 348 Sociology of Work** 3c-01-3cr  
**Prerequisite:** SOC 151

Focuses upon the sociological examination of the various forms of labor, employment, and unemployment present in industrial societies. Examines the nature of work and unemployment in the modern era and how these forms are being transformed in the present period.

**SOC 352 Sociology of Religion** 3c-01-3cr  
**Prerequisite:** SOC 151

Nature, role, and function of religious phenomena in human societies are explored with special attention to certain critical issues as they relate to religion and politics and religion and economics. Examines some fundamental modes of religious life including ritual forms and mythic expressions. Includes other themes such as revitalization movements and processes of secularization in modern societies.

**SOC 357 Sociology of Aging** 3c-01-3cr  
**Prerequisite:** SOC 151

An introduction to various problems faced in the process of growing older. Attitudes of society toward elderly and social and cultural impact of an aging U.S. population examined.

**SOC 361 Social Stratification** 3c-01-3cr  
**Prerequisite:** SOC 151

Examines leading perspectives in the major sociological subfield of social stratification. Attention drawn to different ways of ranking people in human societies, issues concerning the distribution of income and wealth, the role of political power in determining who gets what, and the causes and consequences of social inequality for specific groups.

**SOC 362 Racial and Ethnic Minorities** 3c-01-3cr  
**Prerequisite:** SOC 151

Examines from a historical and comparative perspective the experiences of minority groups, with special emphasis on economic and political domination, stereotyping, prejudice, and discrimination. Discusses techniques of majority group domination and the responses of minority groups. Explores various reasons for the different rates and patterns of assimilation.

**SOC 363 Sociology of Gender** 3c-01-3cr  
**Prerequisite:** SOC 151

Explores current perspectives on the situations faced by women and men, primarily in the United States. Examines issues such as the impact of sex and gender on socialization, the construction of knowledge, intimate relationships, paid work, family relationships, health, and issues of change.

**SOC 387 Social and Cultural Change** 3c-01-3cr  
**Prerequisite:** SOC 151

An exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level. (Offered as SOC 303 prior to 2007-08)

**SOC 391 Foundations of Sociological Practice** 3c-01-3cr  
**Prerequisites:** SOC 151

Develops an understanding of how to use micro and macro sociological theory to analyze, assess, and diagnose human problems. Employing case studies, prepares students to do casework and to help solve interpersonal, group, and organizational problems. Also seeks to acquaint students with the broader professional activity of human services. Recommended prerequisite/corequisite SOC 320. (Offered as SOC 301 prior to 2008-09)

**SOC 392 Clinical Sociological Practice** 3c-01-3cr  
**Prerequisite:** SOC 391

Prepares the student to effect constructive change within individuals, groups, families, and communities. Draws its analysis, diagnosis, and methods from the foundations of sociological theory at the level of intervention with clients. It is strongly recommended that students have at least 6 SOC credits in their specialized area prior to taking SOC 392 other than SOC 151, 320, 460 and 461. (Offered as SOC 302 prior to 2008-09)

**SOC 421 Sociology of Mass Media** 3c-01-3cr  
**Prerequisite:** SOC 151

Examines the development of mass media as dominant cultural forms within advanced industrial societies in the twenty-first century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.

**SOC 427 Social Perspectives on Intimate Partner Violence** 3c-01-3cr  
**Prerequisite:** SOC 151

Considers the range of theoretical explanations from a social perspective for the pervasive violence between intimate partners. Particularly examines the research on intimate partner violence and the implications of this research for programs and policies assisting both the victim and the abuser.

**SOC 428 Child Abuse** 3c-01-3cr  
**Prerequisite:** SOC 151

Examines the prevalence, causes, and social implications of physical, sexual, emotional, and neglect forms of child abuse in society. Child abuse is studied from the individual, family, and societal level perspectives. Potential intervention strategies will also be considered.

**SOC 448 Social Welfare Policy** 3c-01-3cr  
**Prerequisite:** SOC 151

Focuses on the formation of social welfare programs in the U.S., current social policy issues, and debates between conservative, liberal, and social democratic policy analysts. Special attention drawn to various social problems and a range of social policies designed to ameliorate the economic disadvantages of single individuals, single parents, and two-parent families. Also devoted to understanding the relationship between social policy, research, and implementation.

**SOC 452 Disability and Society** 3c-01-3cr  
**Prerequisite:** SOC 151

Analyzes disability from a sociological perspective. Includes consideration of historical and current views of disability and a review of related concepts

from the fields of medical sociology and the sociology of deviance. Also includes an analysis of the effects of disabilities on individuals and families through the life course and a consideration of related ethical, economic, political, and social policy issues. Emphasizes disability as a social construction.

**SOC 456 Field Research Methods** 3c-01-3cr

**Prerequisite:** SOC 460 or permission

An examination of methods and practice of sociology and anthropology in the areas of qualitative and field methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis includes theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

**SOC 457 Computer Use in Sociology** 3c-01-3cr

**Prerequisite:** Instructor permission

Introduces the use of microcomputers in social science research and practice. Uses a variety of software for clinical sociological applications as well as quantitative analysis of social scientific data. These include client information systems, field notes and downloading such notes, exchanging information between agencies, and statistical analyses for program evaluation and forecasting.

**SOC 458 Political Sociology** 3c-01-3cr

**Prerequisite:** SOC 151

An examination of the social context of power and politics, with special reference to such topics as who controls the state and state policy; the role of the state in stabilizing capitalism and protecting the power of the upper class; political activities of the middle and upper classes; and labor, civil rights, and welfare rights social movements in America. Especially considers the problems of conducting and implementing social policy research for social change. Cross-listed as PLSC 346.

**SOC 460 Social Research Methods I** 3c-01-3cr

**Prerequisites:** SOC 320, junior standing

First in a two-course methods sequence. Examines diverse research designs used in the social sciences, i.e., survey, field study, experiment, documentary, and existing statistical data. Focuses both on logic and practice of social research. Student develops a research design to be implemented in the second course in the research sequence.

**SOC 461 Social Research Methods II** 3c-01-3cr

**Prerequisites:** SOC 460, junior standing

Second in a two-course methods sequence. Student implements the research project developed during the first course in this sequence. Primarily applied research, and students use the semester to collect and analyze their data and to prepare a final research report on their findings.

**SOC 480 Sociology Seminar** var-1-3cr

**Prerequisite:** SOC 151

A seminar for advanced students devoted to an intensive analysis of specialized issues within the discipline.

**SOC 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are offered primarily for upper-level undergraduate students.

**SOC 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An opportunity to engage in an in-depth analysis of some topic through consultation with a faculty member. A semester project ordinarily expected. Approval is based on academic appropriateness and availability of resources.

**SOC 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**SOC 484 Readings in Sociology** var-1-3cr

**Prerequisite:** SOC 151

Directed readings on special topics in sociology.

**SOC 493 Internship in Sociology** var-3-12cr

**Prerequisite:** Prerequisites vary by track. Permission of internship coordinator required. GPA within SOC of 2.5 or better.

**Human Services Track Prerequisites:** Grade of C or better in SOC 151, 320, 391, 392, and 6cr within substantive area

**General Sociology Track Prerequisites:** Grade of C or better in SOC 151, 320, 361 or 362 or 363, and 9cr (6cr within substantive area). Students who wish to intern in a human services agency must take SOC 391 and 392

**Applied Social Research Track Prerequisites:** Grade of C or better in SOC 151, 320, 460, 461, and 6cr within substantive area

**Sociology of Disability Services Track Prerequisites:** Grade of C or better in SOC 151, 320, 391, 392, 452, EDEX 111

A supervised experience in a public or private organization that extends and complements coursework at the university.

**SOWK: Social Work**

**Department of Sociology**

**College of Humanities and Social Sciences**

**SOWK 238 Introduction to Social Work** 3c-01-3cr

**Prerequisite:** ANTH 110 or SOC 151

An introduction to the dynamics of helping relationships.

**SPAN: Spanish**

**Department of Foreign Languages**

**College of Humanities and Social Sciences**

**SPAN 101 Elementary Spanish I** 4c-01-4cr

For beginning students. The primary emphasis is on aural/oral skills.

Students learn to converse and ask questions in simple present time and become acquainted with location of Hispanic populations and elements of their daily lives. Attendance is required. Students may not register for or take a D/F repeat in SPAN 101 when credit has already been received for a higher-numbered SPAN course.

**SPAN 102 Elementary Spanish II** 4c-01-4cr

**Prerequisite:** SPAN 101, or the equivalent as established by departmental placement examination

A continuation of SPAN 101. Students learn to express past and future time and continue to learn about Hispanic countries and their cultures. Attendance is required. Students may not register for or take a D/F repeat in SPAN 102 when credit has already been received for a higher-numbered SPAN course.

**SPAN 121 Spanish for Health Care Professionals I** 3c-01-3cr

For beginning students in nursing and other health-related programs. The primary emphasis is on aural/oral skills. Students learn to converse and ask questions related to health care settings in simple present time and near future. They also become acquainted with Hispanic populations and elements of their daily lives. Class and language lab attendance is required. Student may receive credit for only one course from SPAN 101, 111, 121, or 131.

**SPAN 122 Spanish for Health Care Professionals II** 3c-01-3cr

**Prerequisite:** SPAN 121 or equivalent

A continuation of SPAN 121 for students in nursing and other health-related programs. The primary emphasis is on aural/oral skills. Students learn to express past and future time in health care settings. They read articles about medical issues and short stories which concern health care themes in Hispanic cultures. Class and language lab attendance is required. Student may receive credit for only one course from SPAN 102, 122, 132, or 211.

<p><b>SPAN 131 Spanish for the Hospitality Industry I</b> <span style="float: right;"><b>3c-01-3cr</b></span>            Similar to SPAN 101 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. Student may receive credit for only one course from SPAN 101, 111, 121, or 131.</p>	
<p><b>SPAN 132 Spanish for the Hospitality Industry II</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 131 or equivalent            Similar to SPAN 102 but with a special emphasis on the vocabulary and structures used in the hospitality industry: hotel and restaurant management, tourism, and marketing. Class and language lab attendance is required. Student may receive credit for only one course from SPAN 102, 122, 132, or 211.</p>	<p><b>SPAN 290 Spanish for Elementary Teaching</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 201 or equivalent oral proficiency rating. For students in the FLISET Program. For ELED and ECED/PreK-Grade 6 majors completing the FLISET Program.            Increases proficiency in Spanish and prepares student for an internship in an elementary school abroad. Emphasizes vocabulary acquisition and strengthening listening and speaking abilities in Spanish. Through in-class interaction and practice in the language laboratory, students improve linguistic skills, learn the language necessary for dealing with elementary-age children, and acquire basic vocabulary for teaching the content areas of the elementary school curriculum.</p>
<p><b>SPAN 201 Intermediate Spanish</b> <span style="float: right;"><b>4c-01-4cr</b></span>  <b>Prerequisite:</b> SPAN 102 or equivalent            A continuation of previous work on listening, speaking, reading, and writing skills. Students learn to function in everyday situations, expressing opinions and doubts and narrating and describing in present, past, and future time. Exposure to cultural concepts through literary readings. Liberal Studies credit is given. Attendance is required. Student may not register for or take a D/F repeat in SPAN 201 when credit has already been received for a higher-numbered SPAN course.</p>	<p><b>SPAN 340 Hispanic Civilization Through the Nineteenth Century</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent            An introduction to the significant aspects of the culture of both Spain and Spanish America. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations of Hispanic culture as these have revealed themselves through the nineteenth century. Taught in Spanish. Required for all majors and minors.</p>
<p><b>SPAN 220 Intermediate Spanish Conversation</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisites:</b> SPAN 201 or equivalent            Intensive work on oral communication skills with emphasis on spontaneous interpersonal speaking, discourse strategies, vocabulary building, and pronunciation. Required for all majors and minors.</p>	<p><b>SPAN 342 Twentieth-Century Spanish Civilization and Culture</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent            An analysis of the major cultural trends in twentieth-century Spain as they relate to its current problems, aspirations, and values. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations. Taught in Spanish; offered alternate years. (May not duplicate credit for SPAN 382 taken in Valladolid)</p>
<p><b>SPAN 222 Intermediate Spanish Conversation and Grammar–Business</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 201 or equivalent            Same as SPAN 220 but with a special emphasis on the vocabulary and structures used in the business world. Substitutes for SPAN 220.</p>	<p><b>SPAN 344 Twentieth-Century Spanish-American Civilization and Culture</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent            An analysis of the major cultural trends in twentieth-century Spanish America as they relate to its position in the world. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations, including indigenous cultural influences. Taught in Spanish; offered alternate years.</p>
<p><b>SPAN 223 Intermediate Spanish Conversation and Grammar for Pre-Law, Criminology, and Social Services</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 201 or equivalent            Similar to SPAN 220 but with a special emphasis on the vocabulary and structures used in law enforcement, criminal justice, and social services. Substitutes for SPAN 220.</p>	<p><b>SPAN 350 Advanced Spanish Conversation</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent. Students may earn credit for SPAN 350 before taking SPAN 230 only by completion of a minimum six-week study abroad program and successful prior completion of SPAN 220, 222, or 223 (or the equivalent).            Extensive practice in oral communication skills. Emphasizes development of fluency in speaking over a wide range of topic areas. Required for all majors and minors.</p>
<p><b>SPAN 230 Intermediate Spanish Composition and Grammar</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisites:</b> SPAN 220 or equivalent; may be taken concurrently            Intensive practice in written expression and communication in Spanish together with a grammar review. Taught in Spanish. Required for all majors and minors. Meets Liberal Studies requirement for a writing-intensive course for majors.</p>	<p><b>SPAN 354 Commercial Spanish</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent            Especially for majors in Spanish for International Trade. Has three focuses: teaches how to do business communications in Spanish; teaches the vocabulary necessary for dealing with all aspects of trade and commerce; and introduces the special concerns and practices of business in the Spanish-speaking world. Taught in Spanish.</p>
<p><b>SPAN 244 Modern Mexico</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisites:</b> SPAN 201 or equivalent and participation in the Mexico Summer Study Abroad Program            Taught in Mexico as part of the study abroad program; introduces the contemporary culture of the largest Spanish-speaking country in the world. A historical perspective is provided within which to understand current phenomena. Textbook readings are supplemented with readings from literary works and current periodicals. Students gain firsthand experience both through field trips and by living with a Mexican family. Taught in Spanish.</p>	<p><b>SPAN 362 Survey of Peninsular Literature</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 260 or permission            Introduces a careful and critical reading of literary texts from Spain, read either in their entirety or in select passages. Taught in Spanish; offered alternate years.</p>
<p><b>SPAN 260 Introduction to Hispanic Literature</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 230 or equivalent            A prerequisite for any 300- or 400-level course in Hispanic literatures. Provides the tools necessary for developing literary competence and combines a study of literary genres and analysis with an introduction to the literatures of Spain and Spanish America. Taught in Spanish. Required for all majors and minors.</p>	<p><b>SPAN 364 Survey of Spanish-American Literature</b> <span style="float: right;"><b>3c-01-3cr</b></span>  <b>Prerequisite:</b> SPAN 260 or permission            Introduces a careful and critical reading of Spanish-American literary texts, read either in their entirety or in select passages. Taught in Spanish; offered alternate years.</p>
<p><b>SPAN 281 Special Topics</b> <span style="float: right;"><b>var-1-3cr</b></span>  <b>Prerequisite:</b> As appropriate to course content</p>	



<b>SPAN 382-389 Pennsylvania-Valladolid Program</b> <b>18cr</b>	<b>SPAN 411 Golden Age Spanish</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Contact chairperson, Department of Spanish. Courses taken in Valladolid include SPAN 382-389 and SPAN 482 (3cr). Descriptions follow.	<b>Prerequisite:</b> SPAN 260 or permission An analysis of themes, motifs, and stylistic devices of Spanish poetry, novel, and theater of the Renaissance and Baroque. Taught in Spanish.
<b>SPAN 382 Contemporary Spain</b> <b>3c-01-3cr</b>	<b>SPAN 412 The Spanish Novel of the Nineteenth and Twentieth Centuries</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Gives a general view of Spain today in the areas of society, economy, and political institutions. (See SPAN 342)	<b>Prerequisite:</b> SPAN 260 or permission An analysis of selected novels from three major periods: the nineteenth century, the Generation of 1898, and the post Civil War. Taught in Spanish.
<b>SPAN 383 Geography and History of Spain</b> <b>3c-01-3cr</b>	<b>SPAN 413 Spanish Poetry of the Nineteenth and Twentieth Centuries</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Introduces a panorama of Spanish physical, social, and economic geography, including the recent autonomic division of the country and the communication among the autonomies. Also reviews the history of Spain from the fifteenth century to the present with special emphasis on today's Spanish institutions.	<b>Prerequisite:</b> SPAN 260 or permission The study and analysis of lyric poetry in Spain from nineteenth-century poetry through modernism and its evolution to the present. Taught in Spanish.
<b>SPAN 384 History of Spanish Art</b> <b>3c-01-3cr</b>	<b>SPAN 420 Modern Hispanic Theater</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Exposure to the richness of art in the Iberian Peninsula and in particular in the area of Madrid and Castilla-Leon. Studies the evolution of Spanish art in history, giving more emphasis to contemporary tendencies.	<b>Prerequisite:</b> SPAN 260 or permission The study and analysis of modern dramatic works from Spain and Spanish America. Particular emphasis is given to the representational aspect of the works. Taught in Spanish.
<b>SPAN 385 Survey of Spanish Literature</b> <b>3c-01-3cr</b>	<b>SPAN 421 Modern Hispanic Short Story</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Introduces a general study of Spanish literature from its origin to the present time; students learn to appreciate and analyze the different literary genres. An emphasis on twentieth-century literature.	<b>Prerequisite:</b> SPAN 260 or permission The critical analysis of short stories by Spanish and Spanish-American authors. Taught in Spanish; offered in four-year rotation.
<b>SPAN 389 Theory and Practice of Spanish Language</b> <b>3c-01-3cr</b>	<b>SPAN 430 Twentieth-Century Spanish-American Prose</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> SPAN 230 or equivalent or permission Introduces Spanish syntax, morphology, and the Spanish language lexicon, as well as familiar and formal conversation and idiomatic expressions used in everyday situations.	<b>Prerequisite:</b> SPAN 260 or permission Traces literary expressions from the turn of the century to the present in the major prose expressions of the essay, the short story, and the novel. Taught in Spanish; offered in four-year rotation.
<b>SPAN 390 Teaching of Elementary Content Through the Spanish Language</b> <b>3c-01-3cr</b>	<b>SPAN 431 Spanish-American Poetry</b> <b>3c-01-3cr</b>
<b>Prerequisites:</b> Passage of a language proficiency examination and instructor permission Studies current theories of language acquisition processes in children and develops foreign language instructional objectives and activities which integrate language and cultural learning with the content areas of the elementary school curriculum. Through hands-on practice, students develop techniques for teaching functional language, planning lessons, testing language skills, setting curricular objectives, and selecting/designing materials appropriate to the needs and interests of elementary school foreign language learners.	<b>Prerequisite:</b> SPAN 260 or permission A study of Spanish-American poetry from its early manifestations through modernism, post-modernism, and avant-garde. Taught in Spanish.
<b>SPAN 402 Translation and Interpretation</b> <b>3c-01-3cr</b>	<b>SPAN 450 Conversation Forum</b> <b>2c-01-2cr</b>
<b>Prerequisites:</b> SPAN 230, 350 Fundamental translation skills for use in business and industry as well as in academic and popular fields.	<b>Prerequisite:</b> SPAN 350 or equivalent Extensive work on the development of speaking skills at the "Advanced Low" level of oral proficiency, as defined in the Speaking Guidelines developed by the American Council on the Teaching of Foreign Languages. Focuses on paragraph-length discourse and narration and description in present, past, and future time frames within a variety of topics and contexts.
<b>SPAN 403 Applied Linguistics</b> <b>3c-01-3cr</b>	<b>SPAN 453 Spanish Phonetics and Phonemics</b> <b>3c-01-3cr</b>
<b>Prerequisite:</b> SPAN 230 An introduction to Spanish linguistics for students who have had no previous experience in linguistics. Studies the application of areas such as phonology, morphology, syntax, and semantics and explores issues in psycholinguistics and sociolinguistics. Taught in Spanish.	<b>Prerequisite:</b> SPAN 230 An introduction to the study of the phonological system of Spanish and emphasis on improving pronunciation. Includes a theoretical basis for understanding the Spanish sound system, pronunciation practice and recordings, study of Spanish dialects, and linguistic analyses. Taught in Spanish. Required for Spanish Education majors; highly suggested for Spanish majors. (Offered as SPAN 353 prior to 2007-08)
<b>SPAN 404 Advanced Spanish Grammar</b> <b>3c-01-3cr</b>	<b>SPAN 481 Special Topics</b> <b>var-1-3cr</b>
<b>Prerequisites:</b> SPAN 230 and senior standing or departmental permission An in-depth study of Spanish syntax and morphology. Taught in Spanish. Required for all majors.	<b>Prerequisite:</b> As appropriate to course content Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.
<b>SPAN 410 Medieval Literature</b> <b>3c-01-3cr</b>	<b>SPAN 482 Independent Study</b> <b>var-1-6cr</b>
<b>Prerequisite:</b> SPAN 260 or permission Reading and discussion of various medieval genres: brief prose narrative, epic, lyric, and didactic poetry, prose, and medieval drama. Taught in Spanish.	<b>Prerequisite:</b> Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office Provides an opportunity to engage in an in-depth analysis of some topic dealing with the Spanish language and culture through consultation with a faculty member. Approval is based on academic appropriateness and availability of resources.

- SPAN 483 Honors Thesis** var-1-6cr  
**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
 An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.
- SPAN 493 Internship** var-3-12cr  
**Prerequisite:** One semester of study in a Spanish-speaking country  
 A supervised field experience in any Spanish-speaking area of the world with approved public agencies and institutions or private firms, no longer than one semester and no less than one month. Positions are matched as closely as possible with the intern's personal interests and professional goals. For more information contact the Foreign Languages Department. Maximum of 6cr can be applied toward a major.
- SPLP: Speech Pathology and Audiology**  
**Department of Special Education and Clinical Services**  
**College of Education and Educational Technology**
- SPLP 111 Introduction to Communication Disorders** 3c-01-3cr  
 An introduction to study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds and factors that hinder or facilitate speech and language acquisition.
- SPLP 122 Clinical Phonology** 3c-01-3cr  
 A detailed study of the classification of American-English phonemes using the physical and acoustical perspectives. Development of proficiency in use of International Phonetic Alphabet for allophonic transcriptions of normal and disordered speech.
- SPLP 222 Introduction to Audiology** 3c-01-3cr  
 The study of auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing-handicapped child.
- SPLP 242 Speech Science I** 3c-01-3cr  
 The study of the communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the evolution and use of symbols for meaningful communication. The scientific principles of normal oral communication are stressed, and language learning is recognized as a basis for oral communication.
- SPLP 251 Anatomy and Physiology of the Speech and Hearing Mechanism** 3c-01-3cr  
 Consideration of genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing and relationships between systems in production and reception of speech.
- SPLP 254 Classroom Management of Language Disorders** 3c-01-3cr  
 A study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech and language improvement lessons, classroom aids for teaching the child with language, speech, and hearing impairment, and school and community resources for these children. (Required for majors in EDEX and suggested for majors in ELED)
- SPLP 281 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.
- SPLP 311 Aural Rehabilitation** 3c-01-3cr  
**Prerequisites:** SPLP 222, 3.0 GPA  
 Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for the hard-of-hearing child or adult.
- SPLP 334 Language Development** 3c-01-3cr  
**Prerequisite:** 3.0 GPA  
 The study of the development of an interpersonal communication system; language as a system of symbols for communication; the structure of the English language, including phonology, syntax, and semantics with emphasis on the generative evolution of sentences. Highlighting the neurological, social, and psychological bases of language development.
- SPLP 342 Speech Science II** 3c-01-3cr  
**Prerequisites:** SPLP 242, 3.0 GPA  
 Physiologic, acoustic, and perceptual characteristics of speech with special emphasis on speech monitoring and controls. Major lab instrumentation and research techniques in current use are described and demonstrated. The status of present knowledge is summarized and discussed.
- SPLP 406 Articulation and Language Disorders** 3c-01-3cr  
**Prerequisites:** SPLP 111, 242, 251, 334, 3.0 GPA  
 An exploration of the processes related to developmental articulation and language disorders from birth through adolescence. Instruction in the principles underlying modification of these disorders. Preparation of management programs and observation in the Speech and Hearing Clinic required.
- SPLP 408 Stuttering and Voice Disorders** 3c-01-3cr  
**Prerequisites:** SPLP 111, 242, 251, 334, 3.0 GPA  
 An introduction to the developmental, psychogenic, and organic bases for stuttering and voice disorders. Instruction in principles underlying treatment of these disorders with emphasis on anatomical deviations and laryngeal dysfunction. Preparation of management plans and observation in Speech and Hearing Clinic required.
- SPLP 412 Organization and Administration of Speech and Hearing Program** 3c-01-3cr  
**Prerequisites:** SPLP 111, 3.0 GPA (meets requirement for Professional Education course)  
 Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools. The techniques of client identification, scheduling, recordkeeping, appropriate referral, material and equipment selection, teacher and parental counseling, and the development of coordinated professional and interdisciplinary procedures.
- SPLP 420 Speech Clinic** var-1-3cr  
**Prerequisites:** EDUC 242, 342, GPA of 3.0 or better, all major courses, program director's permission  
 An experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature.
- SPLP 481 Special Topics** var-1-3cr  
**Prerequisite:** As appropriate to course content  
 Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.
- SPLP 482 Independent Study** var-1-3cr  
**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office  
 Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.
- THTR: Theater**  
**Department of Theater and Dance**  
**College of Fine Arts**
- THTR 101 Introduction to Theater** 3c-01-3cr  
 An exploration of the theater arts, examining major periods of theater history, selected works of dramatic literature, and the primary theater arts of acting, directing, design, and technical theater. Class experience includes

the analysis of at least two major works of drama, attending two live productions, and viewing of selected televised plays and musicals.

**THTR 111 Foundations of Theater** 3c-01-3cr

A primary course for those engaged in theater and any other performance-related area so as to define the nature of theater art, develop one's own individual system of analysis, and finally acquire an understanding of process, dramatic structure, composition, genre, theatrical styles, and a theory of performance.

**THTR 116 Fundamentals of Theatrical Design** 3c-01-3cr

Introduces the fundamentals of scene, costume, lighting, and sound design for theater and dance. Focuses on creative processes used by designers to make choices. Topics include script analysis, director and designer communication, and the integration of the design elements into a unified production.

**THTR 120 Stagecraft** 3c-01-3cr

An exploration of the material, methods, and procedures utilized in creating a scenic environment. Through instruction and practical applications, students learn the basis of scenic construction and develop competency with the basic materials and equipment used in a theatrical scenery shop.

**THTR 122 Costume Workshop** 3c-01-3cr

Instruction and practical experience in the process of building costumes for the stage. Activities include fitting, cutting, sewing, dyeing, and painting. Also gives instruction in the maintenance of wardrobe, costume stock, materials, and properties.

**THTR 130 Stage Voice** 3c-01-3cr

**Prerequisite:** THTR majors only or instructor permission  
Instruction in basic development of the vocal instrument of the actor in stage performance. Emphasizes resonance, quality, pitch, and projection of the voice while improving the student's ability to articulate.

**THTR 131 Stage Movement** 3c-01-3cr

Instruction in basic stage movement and the physicalization of character. Includes work in character development through variety in movement, introductory work in juggling, stage combat, and mime, and the assessment, awareness, and correction of individual movement problems.

**THTR 132 Introduction to Acting** 3c-01-3cr

Introduces the art and craft of the theatre from the actor's point of view. Through practical application, students develop personal and professional skills that will enhance oral communication, self-presentation, and self-confidence. Students also develop the ability to respond knowledgeably to theatrical productions as audience members.

**THTR 205 Classic Theater I** 3c-01-3cr

**Prerequisite:** HIST 195  
A comprehensive survey of western theater from its origins to the beginning of the Italian Renaissance. Includes the study of significant plays of the period as well as the influence of playwrights, directors, actors, designers, and theorists of the era.

**THTR 206 Classic Theater II** 3c-01-3cr

**Prerequisite:** HIST 195  
A comprehensive survey of western theater from the Italian Renaissance to the end of the eighteenth century. Includes the study of significant plays of the period as well as the influence of playwrights, directors, actors, designers, and theorists of the era.

**THTR 207 Modern Theater I** 3c-01-3cr

**Prerequisite:** HIST 195  
A comprehensive survey of western theater from the time after the French Revolution to the outbreak of the First World War. Includes the study of significant plays of the period as well as the influence of playwrights, directors, actors, designers, and theorists of the era.

**THTR 208 Modern Theater II** 3c-01-3cr

**Prerequisite:** HIST 195  
A comprehensive survey of western theater from the early twentieth century to the present. Includes the study of significant plays of the period

as well as the influence of playwrights, directors, actors, designers, and theorists of the era.

**THTR 221 Basic Stage Lighting** 3c-01-3cr

An introduction to lighting instruments, color media, control boards, physical laws of electricity and optics, graphics, and conventional techniques used in lighting theatrical productions.

**THTR 223 Makeup for the Stage** 3c-01-3cr

Deals with practical application of straight and character makeup and may include instruction in creating beards, wigs, prosthetics, and masks.

**THTR 240 Acting I** 3c-01-3cr

The study of the primary elements of the Stanislavski system of character development. Includes text analysis and the development of physical action through a character's subtext, as well as motivational and improvisational techniques.

**THTR 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content  
Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**THTR 310 Theater Criticism** 3c-01-3cr

**Prerequisite:** Junior or senior THTR major status or permission  
Gives students of theater an opportunity to use what they have learned in the areas of theater (acting, directing, design, and playwrighting) toward the critical process of responding to theater productions. Examines differences between theater criticism and theater reviews while learning to write critical responses to live performances both on and off campus.

**THTR 320 Scene Design** 3c-01-3cr

**Prerequisite:** THTR 116 or permission  
An introduction to scenic design that applies the fundamental principles of theatrical design. Topics include an overview of current scene design practice, design conceptualization, graphic communication methods, and a method of designing theatrical scenery. Practical applications are emphasized through a series of class exercises.

**THTR 321 Stage Lighting Design** 3c-01-3cr

**Prerequisite:** THTR 116 or permission  
An introduction to stage lighting that applies the fundamental principles of theatrical design. Stage lighting topics include an overview of current lighting methods and equipment, the controllable properties and functions of stage lighting, learning to see light, a creative approach to stage lighting, and design graphics. Practical applications are emphasized through a series of class exercises.

**THTR 322 Costume Design** 3c-01-3cr

**Prerequisite:** THTR 116 or permission  
An introduction to the discipline of costume design for the theater with an emphasis on script analysis, figure drawing, character definition, and control of the design elements, supplemented by an overview of costume history.

**THTR 323 Sound Design** 3c-01-3cr

Covers the basic principles and theories of designing sound for the theater. Through demonstration and practical application, covers the following principal areas: basic electronics, recording techniques and equipment, musical and effects integration, theater acoustics, designing sound, and sound reinforcement.

**THTR 324 Advanced Stagecraft** 3c-01-3cr

**Prerequisites:** THTR 120 and 221, or permission  
An advanced exploration of materials, methods, and procedures involved in operating a scenery studio and theater facility. Offers intensive practical experience in technical problem solving, studio planning, and project supervision.

**THTR 340 Acting II** 3c-01-3cr

**Prerequisite:** THTR 240

A continuation of the study of Stanislavski system, focusing on his primary texts, towards a development of individual student techniques. Emphasizes scene study through applying techniques to scene rehearsal and role problems and exploring the relationships between psychological states, physical action, and truth in acting.

**THTR 341 Acting Styles** 3c-01-3cr

**Prerequisites:** THTR 130/131, 240 or instructor permission

A study and practice of advanced acting skills, with special emphasis on style and period. Possible areas of focus: Greek classical, Commedia Dell'Arte (farce), French Neoclassical, Restoration Comedy, Melodrama, High Comedy (Wilde/Coward), or Theater of the Absurd.

**THTR 342 Acting Shakespeare** 3c-01-3cr

**Prerequisites:** THTR 240, 340 or instructor permission

An advanced acting studio which prepares students to perform in Shakespeare's plays. Provides a background overview of the Elizabethan period in addition to various methods towards approaching the movement, language, and verse forms from an actor's point of view.

**THTR 345 Touring Young People's Theater** 3c-01-3cr

Introduces the fundamentals of young people's theater for audiences aged five through fifteen years. Class members select appropriate children's literature, develop a script through improvisation, and rehearse and tour their production to the surrounding schools.

**THTR 347 Playwriting** 3c-01-3cr

**Prerequisite:** THTR 110 or instructor permission

A practical exploration of the craft and process of playwriting. Focuses primarily on the practical, "hands-on" experiences approximating the "developmental process" currently in use in the American theater. The student is guided from the initial concept through synopsis, outlines, working drafts, and completion of an original one-act play and a "staged reading" of this project. **Note:** Cross-listed as ENGL 347. Either of these courses may be substituted for each other and may be used interchangeably for D or F repeats but may not be counted for duplicate credit.

**THTR 350 Directing** 3c-01-3cr

**Prerequisites:** THTR 111, 240, or instructor permission

An introduction to basic directing skills: casting, floor plans, blocking, rehearsal procedures, and the applications of scene and character analysis. Prepare short scenes for class presentation.

**THTR 481 Special Topics** var-1-6cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**THTR 482 Independent Study** var-1-6cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated to a maximum of 6cr. Approval is based on academic appropriateness and availability of resources.

**THTR 483 Honors Thesis** var-1-6cr

**Prerequisites:** Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

An intensive, focused study involving independent research culminating in a written thesis approved by a thesis director and two faculty readers/committee members. May be taken more than once to a maximum of 6sh.

**THTR 484 Directing Studio** 3c-21-3cr

**Prerequisites:** THTR 350 or instructor permission

An opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness. Practical application of principles of directing to specific

problems in directing. Student projects performed in public, open-class recitals. May be repeated.

**THTR 486 Practicum in Production** var-0-3cr

**Prerequisite:** THTR major standing or instructor permission

An opportunity with academic credit to make significant contributions to campus productions augmenting theater coursework in the areas of directing, acting, stage management, technical direction, design (sound, set, lights, costumes, makeup), properties, scenic construction and scenic art painting, costume technology, dance, and running crews. Repeatable course required of all THTR majors for a minimum of six semesters, one of which must be a final project for senior majors.

**THTR 487 Acting Studio** 3c-21-3cr

**Prerequisites:** Minimum of THTR 240 or instructor permission; individual foci have additional prerequisites

An advanced studio course offering scene practice with faculty direction, coaching, and criticism. Specific focus of scene work varies from semester to semester, including improvisation techniques, stage dialects, audition techniques, and acting for the camera as alternating semester options. May be repeated with a different focus each time.

**THTR 489 Technical Theater Problems** 3c-01-3cr

Open to all students desiring instruction in a variety of technical theater areas not presently covered in other courses. Topics to include sound design, stage management, set props, media make-up, technical drawing/mixed media, and scene painting. May be repeated.

**THTR 493 Internship** var-3-12cr

**Prerequisite:** Instructor permission

Opportunities for students to gain experience with professional performance organizations in areas related to theater and dance.

**UVWD: Universitywide Courses**  
**Academic Affairs Division**

**UVWD 480 T.H.I.S. Seminar** 3c-01-3cr

An academic seminar taken at the Pennsylvania State System of Higher Education University Center in Harrisburg in conjunction with the T.H.I.S. internship. Consists of public policy information, decision making, and budgeting and addresses question-and-answer sessions with leading state government policymakers. See description under Academic Affairs areas. Restricted to the T.H.I.S. internship participant. See UVWD 493.

**UVWD 493 T.H.I.S. Internship** var-12cr

A practical experience at the policymaking level of the state government that also requires a research project. Must have a 3.0 GPA and submit a sample of writing skills with the application to the Experiential Education Office. Open to any IUP major. See description under Academic Affairs areas. Concurrent seminar course required. See UVWD 480.

**VOED: Vocational Education**  
**Center for Career and Technical Personnel Preparation**  
**College of Education and Educational Technology**

**VOED 010 Industrial Electrical Technology** var-1-18cr

**Prerequisite:** Center/department permission

Emphasizes comprehensive industrial electrical technology through training in specialty concentrations applied to design, development, and testing of electrical circuits, devices, and systems for generating electricity and the distribution and utilization of electrical power. Carries institutional credit only.

**VOED 100 Preparation of the Vocational Professional I** var-1-15cr

Personalized, self-paced vocational teacher preparation. Develops, demonstrates, and documents competence in selected pedagogical competencies. Individualized instruction is supplemented with monthly seminars. Self-evaluation is encouraged in the program, utilizing videotaping and the feedback from a team of professional teacher educators.

**VOED 101 Introduction to Career and Technical Education** 1c-01-1cr

**Prerequisite:** Recommendation by Western Region Career and Technical School director

Emphasizes basic elements of teaching in the diverse secondary career and technical classroom. A field-based course focusing on skill areas defined by the Pennsylvania Department of Education—Bureau of Career and Technical Education, such as classroom safety, accommodations for students with special needs, and classroom management.

**VOED 102 Instructional Planning in the Career and Technical Classroom** 2c-01-2cr

**Prerequisite:** VOED 101

Instructional planning for the CTE classroom and laboratory delivered through field-based instruction. Major emphasis is on planning for instruction, safety procedures, and CTE performance objectives. Instructional plans will include consideration of individual learning styles and accommodations for students with special needs.

**VOED 103 Strategies for Teaching Career and Technical Education** 3c-01-3cr

**Prerequisites:** VOED 101 and 102

Introduces instructional strategies and evaluation methods appropriate in career and technical education. Emphasis is on the planning and delivery of lessons that apply these strategies in the secondary career and technical classroom. Special attention is given to adapting and individualizing instruction for the diverse student population enrolled in the career and technical class. A field-based course with classroom visitations by a university faculty member.

**VOED 201 Making Accommodations for Students with Special Needs in the Career and Technical Classroom** 1c-01-1cr

**Prerequisites:** VOED 101, 102, 103

A companion course to EDEX 301. Students apply instructional methods effective for educating students with disabilities and learning style differences in their career and technical classroom. A field-based course with classroom visitations by a university faculty member.

**VOED 202 Industry Linkages for Career and Technical Programs** 3c-01-3cr

**Prerequisite:** VOED 201

Addresses the requirements for industry input and validation for all secondary career and technical programs and focuses on developing and maintaining an effective occupational advisory committee. Emphasis is on the teacher's responsibility for providing appropriate information to the committee and taking action to follow up on the committee's recommendations.

**VOED 203 Incorporating Reading and Communications Strategies in the Career and Technical Classroom** 3c-01-3cr

**Prerequisites:** VOED 102, 103

Addresses methods and materials for assisting students as they read, study, and learn in the career and technical classroom. Emphasis is on approaches that facilitate learning of both content and process. Current research is explored, and classroom applications are emphasized for integrating academic standards. A field-based course with classroom visitations by a university faculty member.

**VOED 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**VOED 301 Integrating Math and Science in Career and Technical Education** 3c-01-3cr

**Prerequisite:** Completion of coursework for Vocational I certificate  
Focuses on the integration of math- and science-related content in the career and technical classroom. Current Pennsylvania Department of Education mandates and strategies for meaningful integration and assessment will be addressed. Facilitating the academic skill development of

secondary career and technical students is emphasized. A field-based course with classroom visitations by a university faculty member.

**VOED 302 Career Education in the Career and Technical Classroom** 3c-01-3cr

**Prerequisite:** Completion of coursework for Vocational I certificate  
Emphasizes current labor market statistics and resources for identifying labor market trends. The influence of interests, aptitudes, and work style preferences in making informed career decisions will be explored. The role of career and technical student organizations, articulation agreements, and work-based learning to enhance career education in the career and technical classroom will be discussed. The emphasis will be on integrating career information relevant for the career and technical program in the classroom and a review of the mandates for this integration.

**VOED 395 Vocational Education Writing Experience** var-0cr

Writing assignments such as abstracts, logs of activities, philosophy papers, training plans, presentation plans, lesson plans, etc., are completed in conjunction with selected instructional modules from VOED 100 and 400.

**VOED 400 Preparation of the Vocational Professional II** var-1-15cr

**Prerequisite:** Successful completion of VOED 100

Personalized, self-paced vocational teacher preparation. Develops, demonstrates, and documents competence in selected teaching skills in the areas of program planning, program development, program evaluation, and managing and evaluating instruction in a vocational school setting. Self-evaluation is encouraged in the program, utilizing videotaping and the feedback from a team of professional teacher educators.

**VOED 401 Special Topics in Vocational Technical Preparation** var-1-12cr

**Prerequisite:** Center permission

Provides opportunities to develop additional technical skills in areas related to their occupational competence under professional supervision. Topics are determined through individual counseling, through priority needs identified by advisory committees, and through evaluation of technical competence by center teaching staff.

**VOED 402 Special Topics in Vocational Pedagogical Preparation** var-1-15cr

**Prerequisite:** Center permission

Provides opportunities to develop additional teaching skills under professional supervision. Topics are determined through identification of priority areas in vocational education using national and state surveys and students' individual needs.

**VOED 403 Assessment and Evaluation in Career and Technical Education** 3c-01-3cr

**Prerequisite:** Completion of coursework for Vocational I certificate

The preparation, administration, and scoring of classroom assessments aligned with curriculum and instruction in the career and technical classroom is emphasized as well as analysis and interpretation of test results. Attention will be given to the design of performance assessments and the definition of acceptable levels of performance. Checklists and rating scales and their application in the career and technical classroom will be included along with formative and summative assessment.

**VOED 404 Research in Career and Technical Education** 3c-01-3cr

**Prerequisite:** Completion of coursework for Vocational I certificate

Introduces research in the career and technical classroom. An emphasis is placed on using a variety of research methods to solve problems in the educational environment. Research findings are implemented into the classroom environment and results are shared with peer career and technical teachers.

**VOED 405 Professional Seminar in Career and Technical Education** 3c-01-3cr

**Prerequisite:** Completion of coursework for Vocational I certificate

A history of career and technical education; the impact of the educational reform on career and technical education and workforce development and career and technical education's importance within our society. Topics include leaders in vocational education; societal influences on vocational

curriculum design; and professional responsibilities, legislative initiatives, social issues, and organizations involved in and impacting career and technical and workforce development education. A capstone course focusing on the professional growth of the career and technical teacher intern.

**VOED 450 Technical Preparation of the Vocational Professional** 24cr

Competency assessment of occupational experience through national standardized written and performance examinations.

**VOED 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**VOED 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

**WMST: Women's Studies  
Women's Studies Program  
College of Humanities and Social Sciences**

**WMST 200 Introduction to Women's Studies** 3c-0l-3cr

Focuses on women as they are and as they have been—as represented by the work of writers and as presented in the theory and research of various disciplines. Historical and contemporary images of women are examined in terms of their impact on our lives. The relationships of women to social institutions such as education, religion, and health care are explored. Alternative theories explaining the roles and status of women are compared. Attempts to help us understand the choices and experiences women face in their everyday personal, work, and public lives.

**WMST 281 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 281 are offered primarily for lower-level undergraduate students.

**WMST 400 Feminist Theory** 3c-0l-3cr

A seminar focusing on modern feminist theory. Explores feminist critiques of traditional knowledge, methods, and theories and examines theoretical debates within feminism with an emphasis on the shifting conceptualizations of gender, race, class, and sexual orientation. Also considers the continuing development of distinctive feminist methodologies both inside and outside the academy.

**WMST 481 Special Topics** var-1-3cr

**Prerequisite:** As appropriate to course content

Offered on an experimental or temporary basis to explore topics not included in the established curriculum. A given topic may be offered under any special topic identity no more than three times. Special topics numbered 481 are primarily for upper-level undergraduate students.

**WMST 482 Independent Study** var-1-3cr

**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Provost's Office

Students with interest in independent study of a topic not offered in the curriculum may propose a plan of study in conjunction with a faculty member. Approval is based on academic appropriateness and availability of resources.

# Directory

Note: All IUP personnel and students can be found in the online directory at <http://search.people.iup.edu>.

## Division of Academic Affairs

*Provost and Vice President for Academic Affairs:* **Gerald W. Intemann**, Ph.D., Stevens Institute of Technology

*Associate Vice President for Academic Administration:* **John N. Kilmarx**, Ph.D., Binghamton University

### Northpointe Regional Campus

*Interim Director:* **Richard J. Muth**, M.A., Indiana University of Pennsylvania

*Interim Assistant Director:* **Kristen A. O'Hara**, M.S., Robert Morris University

### Punxsutawney Regional Campus

*Dean:* **Terry Appolonia**, M.A., Indiana University of Pennsylvania

*Assistant Dean of Students:* **Theodore G. Turner**, M.S., Indiana University of Pennsylvania

### Office of the Registrar

*Registrar:* **Robert J. Simon**, B.A., Indiana University of Pennsylvania

*Associate Registrar for Student Records:* **Jeannie Broskey**, B.S., University of Pittsburgh

*Interim Associate Registrar for Registration and Scheduling:* **Susan M. Frycklund**, B.A., Indiana University of Pennsylvania

*Assistant Registrar:* **Tracy VanHorn-Juart**, B.S.Ed., Indiana University of Pennsylvania

*Associate Provost for Academic Programs and Planning:* **Innocent Onwueme**, Ph.D., University of California

### Office of Distance Learning and Continuing Education

*Executive Director:* **Stephen J. Anspacher**, M.A., Columbia University

### Liberal Studies

*Director:* **David H. Pistole**, Ph.D., Indiana State University

### Center for Teaching Excellence

*Director:* **Mary Anne Hannibal**, Ph.D., State University of New York at Buffalo

### School of Graduate Studies and Research

*Dean, School of Graduate Studies and Research:* **Timothy P. Mack**, Ph.D., The Pennsylvania State University

*Dean's Associate:* **Shari A. Robertson**, Ph.D., University of Wisconsin-Madison

*Assistant Dean for Administration:* **Paula L. Stossel**, M.S., Chestnut Hill College

*Assistant Dean for Research:* **Hilliary E. Creely**, Ph.D., Brown University

*Program Director:* **Frank V. DeStefano**, M.A., Indiana University of Pennsylvania

### Eberly College of Business and Information Technology

*Dean:* **Robert C. Camp**, Ph.D., University of Mississippi

*Dean's Associate:* **Prashanth N. Bharadwaj**, Ph.D., Rutgers, The State University of New Jersey–New Brunswick Campus

*Assistant Dean for Administration:* **Cynthia L. Strittmatter**, M.B.A., Indiana University of Pennsylvania

*Assistant Dean for Student and Alumni Services:* **Dorothy M. Gracey**, Ed.D., Indiana University of Pennsylvania

*Assistant Dean for Technology:* **Rajendra K. Murthy**, M.B.A., Indiana University of Pennsylvania

### College of Education and Educational Technology

*Interim Dean:* **A. Keith Dils**, Ed.D., West Virginia University

*Interim Associate Dean for Teacher Education:*

**Joseph W. Domaracki**, Ph.D., University of Pittsburgh

*Associate Dean for Academic Affairs:* **Edward W. Nardi**, D.Ed., Indiana University of Pennsylvania

*Assistant Dean for Information and Communications Technology:* **Lloyd Onyett**, D.Ed., California State University, Chico

*Director of Field Placement Assistance:* **Laurie N. Nicholson**, D.Ed., Indiana University of Pennsylvania

*Dean's Associate:* **Laurie N. Nicholson**, D.Ed., Indiana University of Pennsylvania

### College of Fine Arts

*Dean:* **Michael J. Hood**, M.F.A., University of New Orleans

*Assistant Dean for Curriculum and Instruction:* **Jan A. Mellon**, M.A., Indiana University of Pennsylvania

*Director, The Lively Arts:* **Hank Knerr**, M.F.A., The Pennsylvania State University

*Technical Director:* **David A. Surtasky**, B.A., Indiana University of Pennsylvania

### College of Health and Human Services

*Interim Dean:* **Mary E. Swinker**, Ph.D., The Ohio State University

*Assistant Dean for Administration:* **Dolores Brzycki**, D.A., The Ohio State University

*Director, Academic Planning and Assessment:* **Mary E. Williams**, Ph.D., Case Western Reserve University

### College of Humanities and Social Sciences

*Dean:* **Yaw A. Asamoah**, Ph.D., Washington University

*Associate Dean:* **Michele A. Norwood**, Ed.D., University of Pittsburgh

*Dean's Associate:* **Chauna J. Craig**, Ph.D., University of Nebraska-Lincoln

*Coordinator, Central Academic Services:* **Thomas A. Rodgers**, B.S., Indiana University of Pennsylvania

### John P. Murtha Institute for Homeland Security

*Codirectors:*

**Dighton M. Fiddner**, Ph.D., University of Pittsburgh

**Werner D. Lippert**, Ph.D., Vanderbilt University

### College of Natural Sciences and Mathematics

*Dean:* **Deanne L. Snively**, Ph.D., Yale University

*Assistant Dean:* **Aleksandra B. Kaniasty**, M.A., Adam Mickiewicz University of Poznan

*Dean's Associate:* **Daniel A. Burkett**, Ph.D., Carnegie Mellon University

### IUP Libraries

*Dean:* **Luis J. Gonzalez**, M.P.A., Baruch College, City University of New York

*Assistant to the Dean:* **Patricia A. Cornman**, B.S., Indiana University of Pennsylvania

*Associate Dean:* Vacant

*Library Technology and Security Manager:* **D. Edward**

**Zimmerman**, B.A., Indiana University of Pennsylvania

### Workforce Education and Economic Development

*Interim Director:* **Tracey L. Missien**, M.B.A., Indiana University of Pennsylvania

### Information Technology Services

*Chief Information Officer:* **William S. Balint III**, B.S., Indiana University of Pennsylvania

*Executive Director:* **Todd D. Cunningham**, B.S., Duquesne University

*Coordinator, Applications Development:* **Jeffrey K. Montgomery**, B.S., Indiana University of Pennsylvania

*Coordinator, Research and Administration:* **Daniel J. Yuhas**, B.S., Indiana University of Pennsylvania

*Coordinator, Technical Services:* **Paul M. Grieggs**, B.B.A., St. Bonaventure University

*Coordinator, User Services:* **Amanda L. Marshall**, B.S., Indiana University of Pennsylvania  
*Coordinator, Desktop Services:* **Benjamin K. Dadson**, B.A., Indiana University of Pennsylvania  
*Coordinator, Central Academic Services:* **Thomas A. Rodgers**, B.S., Indiana University of Pennsylvania

#### **Robert E. Cook Honors College**

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*Records Information Manager:* **Kelly J. Empfield**, A.A., Indiana University of Pennsylvania  
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**Susan M. Stake**, B.A., Slippery Rock University  
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**Shari A. Trinkley**, B.A., Indiana University of Pennsylvania  
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*Project Manager:* **Richard A. Manslow**, P.E.; B.S., The Pennsylvania State University  
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*Facilities Operations Director:* **J. Douglas Miller**, B.S., The Pennsylvania State University  
*Facilities Administrator:* **Michael B. Mann**, B.A., Indiana University of Pennsylvania  
*Facilities Project Manager:* **Ronald T. Succheralli**  
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*Financial Operations Assistant Director:* **Brenda K. Penrod**, B.S., Indiana University of Pennsylvania  
*Payroll Services Director:* **Mary K. Smelko**, B.S., Indiana University of Pennsylvania  
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**Randall W. LeBlanc**, C.P.A.; B.S., Oral Roberts University  
**Thomas M. Toia**, C.P.A.; M.B.A., California University of Pennsylvania



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*Grant Accountants:*  
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*Kovalchick Convention and Athletic Complex Operations:*

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**Barbara A. Ritts**, B.S., Indiana University of Pennsylvania

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*Assistant Director for Orientation Programming:*

**Katie E. Motycki**, M.A., Indiana University of Pennsylvania

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#### **Career Development Center**

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*Associate Director:* **Deborah Saunders Stanley**, M.Ed., University of Georgia

*Assistant Director for Employer Relations and Development:*

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#### **Center for Health and Well-Being**

*Interim Executive Director, Center for Health and Well-Being:*

**Malinda M. Cowles**, R.N.; C.H.E.S.; M.A., Indiana University of Pennsylvania

*Associate Director, Center for Health and Well-Being/Health Education and Advocacy:* **Malinda M. Cowles**, R.N.; C.H.E.S.; M.A., Indiana University of Pennsylvania

*Assistant Director, Center for Health and Well-Being/Alcohol, Tobacco, and Other Drugs:* **Ann E. Sesti**, M.A., Slippery Rock University

*Assistant Director, Center for Health and Well-Being/Recreation:*

**Peter D. Shoop**, M.S., Eastern Illinois University

#### **Center for Student Life**

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*Assistant Director, Center for Student Life/Student Leadership and Greek Life:* **Elizabeth E. Sarneso**, M.A., Indiana University of Pennsylvania

*Assistant Director, Center for Student Life/Program Coordinator:*

**Richard D. Kutz**, M.Ed., Indiana University of Pennsylvania

*Assistant Director, Center for Student Life/Student Engagement and Student Conduct:* **Amber N. Sherman**, Ed.D., Indiana University of Pennsylvania

*Assistant Director, Center for Student Life/Student Conduct:*

**Theodore M. Cogar**, M.Ed., University of Maine

#### **Center for Student Success**

*Director:* TBA

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*Counseling Psychologist:* **Rita G. Drapkin**, Ph.D., University of Pittsburgh

*Coordinator of Training and Counseling Psychologist:*

**Eric W. Rosenberger**, Ph.D., The Pennsylvania State University

*Coordinator of Substance Abuse Treatment and Counseling Psychologist:* **David M. Myers**, Ph.D., The Pennsylvania State University

*Counseling Psychologist:* **Kim Weiner**, Ph.D., University of Pittsburgh

*Haven Project Coordinator:* **Christine M. Butler**, M.A., Indiana University of Pennsylvania

*Haven Project Clinician:* **Jessica E. Miller**, Psy.D., Indiana University of Pennsylvania

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*Associate Director:* **Alisa L. DeStefano**, B.S., West Liberty State College

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**Erin E. Fritz**, M.A., Indiana University of Pennsylvania

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**Shawn T. Jones**, M.S., Indiana University of Pennsylvania

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**Megan A. McCue**, M.Ed., Indiana University of Pennsylvania

**William M. Sands**, M.Ed., The Pennsylvania State University

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**Shannon F. Gironda**, B.S., Indiana University of Pennsylvania

**Sarah A. Harvey**, B.A., St. Vincent College

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**Todd A. VanWieren**, Ph.D., Virginia Commonwealth University

## Housing and Residence Life

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**Michael W. Lemasters**, M.A., Bowling Green State University

*Associate Director, Operations:* **Leonard J. Kasubick**

*Assistant Dean of Students/Associate Director of Residence Life:*

**Sondra R. Dennison**, M.A., New Mexico State University

*Assistant Director, Residence Life, Training and Development:*

**Julene J. Pinto-Dyczewski**, M.A., Indiana University of Pennsylvania

*Assistant Director, Residence Life, Operations and Community*

*Development:* **Malaika M. Turner**, M.S., Indiana University

of Pennsylvania

*Residence Directors:*

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**K. David Berberich**, M.A., University of Cincinnati

**Nichole M. Fest**, M.S., University of Central Arkansas

**Adam Jones**, M.A., Geneva College

**Deena M. Kelly**, M.A., Indiana University of Pennsylvania

**Nancy A. Nkumsah**, M.A., Centenary College

**William J. Zimmerman**, M.A., Indiana University of Pennsylvania

*Assistant Director, Assessment and Academic Initiatives:*

**John G. Makara**, M.Ed., The Pennsylvania State University

*Assistant Director, Occupancy:* **Jennifer L. Trimble Faught**,

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## Intercollegiate Athletics

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*Business Officer, Director of Summer Camps, Athletic Ticket*

*Manager:* **Lisa R. Bash-Ward**, M.S., Indiana University of Pennsylvania

*Director, Sports Information:* **Ryan A. Rebholz**, M.S., East Stroudsburg University

*Athletics Facilities Operations and Equipment Coordinator:*

**James J. Watta**, M.A., Indiana University of Pennsylvania

*Athletic Trainers:*

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**Jessica S. Baum**, M.S., Ohio University

**Frank A. Trenney**, M.S., Indiana University Bloomington

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*Nursing Supervisor:* **Judy H. Fairbanks**, R.N., B.C.; M.S., Indiana University of Pennsylvania

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*Director, Program Services:* **J. Sam Barker**, B.A., Indiana University of Pennsylvania

*Director, Co-op Store:* **Timothy L. Sharbaugh**, B.A., Indiana University of Pennsylvania

*Associate Director:* **Marsha D. Bleakney**, B.A., University of Pittsburgh

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*Director of Student Publications:* **Joseph J. Lawley**, B.S., Indiana University of Pennsylvania

## University Professors Emeriti

Charles D. Cashdollar, John N. Fox, Richard D. Magee, Donald S. McPherson, Donald A. Walker

## Emeriti

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**Adult and Community Education:** Trenton R. Ferro

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**Consumer Services:** Willa Ruth Cramer, Betty L. Wood

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**IUP Academy of Culinary Arts:** Chef Timothy Brown

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**Sociology:** Rosalyn B. Darling, Harvey S. Holtz, Herbert M. Hunter

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**University School:** Dorothy I. Lingenfelter, Lillian G. Martin

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Professor, Mathematics

**Ibrahim J. Affaneh**, Ph.D., University of Utah  
Professor, Chairperson, Finance and Legal Studies

**Francisco E. Alarcón**, Ph.D., University of Iowa  
Professor, Chairperson, Mathematics

**Mohamed H. Albohali**, Ph.D., Kansas State University  
Professor, Management Information Systems and Decision Sciences

**Abbas J. Ali**, Ph.D., West Virginia University  
Professor, Management

**Azad I. Ali**, D.Sc., Robert Morris University  
Associate Professor, Technology Support and Training

**Parveen Ali**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Developmental Studies

**Sanwar Ali**, Ph.D., Texas Christian University  
Professor, Computer Science

**Francis Allard**, Ph.D., University of Pittsburgh  
Associate Professor, Anthropology

**Robert E. Alman**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Health and Physical Education

**Luis C. Almeida**, Ph.D., The Pennsylvania State University  
Assistant Professor, Communications Media

**Hussam Ahmad Al-Shammari**, Ph.D., University of Texas at Arlington  
Associate Professor, Management

**Lynne B. Alvine**, Ed.D., Virginia Polytechnic Institute and State University  
Professor, English

**William D. Ames**, L.L.M. (Taxation), University of San Diego  
Associate Professor, Finance and Legal Studies

**Sekhar Anantharaman**, Ph.D., University of Central Florida  
Professor, Accounting

**Fred P. Anderson**, M.B.A., University of Michigan-Ann Arbor  
Assistant Professor, Management

**John A. Anderson**, Ph.D., University of New Hampshire  
Professor, Sociology

**Kim L. Anderson**, Ph.D., University of Pittsburgh  
Associate Professor, Accounting

**Anastasia Antonacos**, D.Mus., Indiana University System  
Assistant Professor, Music

**Paul-Marie T. Arpaia**, Ph.D., Georgetown University  
Associate Professor, History

**Maali H. Ashamalla**, Ph.D., The City University of New York  
Professor, Management

**Dennis L. Ausel**, Ed.D., Indiana University Bloomington  
Professor, Communications Media

**W. Timothy Austin**, Ph.D., University of Georgia  
Professor, Criminology

**Amadu D. Ayebo**, Ph.D., University of Nebraska-Lincoln  
Professor, Biology

- Gawdat G. Bahgat**, Ph.D., Florida State University  
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- Gary L. Bailey**, Ph.D., Indiana University Bloomington  
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Assistant Professor, Foreign Languages
- Madan M. Batra**, Ph.D., University of Wisconsin-Madison  
Professor, Marketing
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Instructor, Culinary Arts
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Assistant Professor, Intercollegiate Athletics
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Instructor, Music
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Professor, Marketing
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Professor, Geography and Regional Planning
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Professor, Punxsutawney Regional Campus
- Holley A. Belch**, Ph.D., Bowling Green State University  
Professor, Student Affairs in Higher Education
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Professor, Geography and Regional Planning
- John E. Benhart**, Ph.D., University of Tennessee, Knoxville  
Professor, Chairperson, Geography and Regional Planning
- Gail I. Berlin**, Ph.D., University of Pennsylvania  
Professor, English
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Professor, Psychology
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Associate Professor, Chairperson, Marketing
- Prashanth N. Bharadwaj**, Ph.D., Rutgers, The State University of New Jersey-New Brunswick  
Professor, Management; Dean's Associate, Eberly College of Business and Information Technology
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Assistant Professor, Biology
- Shundong Bi**, Ph.D., Howard University  
Associate Professor, Biology
- George R. Bieger**, Ph.D., Cornell University  
Professor, Professional Studies in Education
- Patrick A. Bizzaro**, Ph.D., Miami University  
Professor, English
- Resa C. Bizzaro**, Ph.D., University of North Carolina at Greensboro  
Assistant Professor, English
- Christine Black**, Ph.D., The Pennsylvania State University  
Professor, Health and Physical Education
- Laurel J. Black**, Ph.D., Miami University  
Associate Professor, English
- Lynanne Black**, Ph.D., Temple University  
Assistant Professor, Chairperson, Educational and School Psychology
- Barbara S. Blackledge**, M.F.A., University of North Carolina at Greensboro  
Professor, Theater and Dance
- Elaine A. Blair**, Ph.D., University of Pittsburgh  
Professor, Chairperson, Health and Physical Education
- Janet A. Blood**, Ph.D., Oregon State University  
Assistant Professor, Human Development and Environmental Studies
- Holly R. Boda-Sutton**, M.F.A., Texas Woman's University  
Professor, Theater and Dance
- Wayne K. Bodle**, Ph.D., University of Pennsylvania  
Assistant Professor, History
- Christian L. Bolden**, Ph.D., University of Central Florida  
Assistant Professor, Criminology
- Robert J. Boldin**, Ph.D., University of Pennsylvania  
Professor, Finance and Legal Studies
- Kathryn Bonach**, Ph.D., University of Pittsburgh  
Associate Professor, Sociology
- Susan R. Boser**, Ph.D., Cornell University  
Associate Professor, Sociology
- Lynn A. Botelho**, Ph.D., University of Cambridge  
University Professor and Professor, History
- Fredalene D. Bowers**, Ph.D., University of Pittsburgh  
Professor, Chairperson, Human Development and Environmental Studies
- Faye L. Bradwick**, C.P.A., J.D., LL.M. (Tax), Syracuse University and Georgetown University  
Associate Professor, Accounting
- Jill L. Brady**, Ph.D., University of Pittsburgh  
Assistant Professor, Special Education and Clinical Services
- John Branscum**, Ph.D., University of Cincinnati  
Assistant Professor, English
- Holly Branthoover**, Ed.D., Duquesne University  
Associate Professor, Counseling
- William M. Brenneman**, Ph.D., University of Southern Mississippi  
Assistant Professor, Biology
- Michael W. Briggs**, Ph.D., Purdue University  
Associate Professor, Chemistry
- Roger L. Briscoe**, Ph.D., University of Michigan-Ann Arbor  
Associate Professor, Educational and School Psychology
- Frank B. Brooks**, Ph.D., The Ohio State University  
Associate Professor, Foreign Languages
- Jeannie-Marie Brown**, M.F.A., University of Massachusetts  
Assistant Professor, Theater and Dance
- Karen L. Brown**, M.L.S., North Carolina Central University  
Associate Professor, University Libraries
- Sarah L. Brown**, Ph.D., Arizona State University  
Assistant Professor, Human Development and Environmental Studies
- Michelle L. Bruno**, Ph.D., The Ohio State University  
Assistant Professor, Counseling
- Donald W. Buckwalter**, Ph.D., University of Tennessee, Knoxville  
Professor, Geography and Regional Planning
- Kimberly J. Burch**, Ph.D., University of Pittsburgh  
Associate Professor, Mathematics
- Daniel A. Burkett**, Ph.D., Carnegie Mellon University  
Associate Professor, Mathematics; Dean's Associate, College of Natural Sciences and Mathematics
- Framarz Byramjee**, Ph.D., Florida Atlantic University of Boca  
Associate Professor, Marketing
- James M. Cahalan**, Ph.D., University of Cincinnati  
Professor, English
- Theresa L. Calderone**, D.Ed., Nova Southeastern University  
Assistant Professor, Nursing and Allied Health Professions
- Carolyn K. Camp**, Ph.D., Indiana University of Pennsylvania  
Assistant Professor, English
- Carol L. Caraway**, Ph.D., Oklahoma State University  
Professor, Philosophy
- Stacia A. Carone**, Ed.D., University of Virginia  
Assistant Professor, Counseling
- Wendy K. Carse**, Ph.D., Tulane University  
Associate Professor, English
- Sibyl C. Cato**, Ph.D., The Ohio State University  
Assistant Professor, Counseling
- Stephanie B. Caulder**, D.M.A., Florida State University  
Associate Professor, Music

**Tracey L. Cekada**, Sc.D., Robert Morris University  
Associate Professor, Safety Sciences

**Karen R. Cercone**, Ph.D., University of Michigan-Ann Arbor  
Professor, Geoscience; Provost Fellow

**David D. Chambers**, Ph.D., University of Illinois at Urbana-Champaign  
Associate Professor, Political Science

**C. Stuart Chandler**, Ph.D., Harvard University  
Professor, Chairperson, Religious Studies

**Mukesh K. Chaudhry**, D.B.A., Cleveland State University  
Professor, Finance and Legal Studies

**Stanley L. Chepaitis**, D.M.A., University of Rochester-Eastman School of Music  
Associate Professor, Music

**Beverly M. Chiarulli**, Ph.D., Southern Methodist University  
Associate Professor, Anthropology

**Jason S. Chimonides**, M.F.A., Florida State University  
Assistant Professor, Theater and Dance

**Sung-Gay Chow**, Ph.D., University of Alabama  
Associate Professor, English

**John C. Chrispell**, Ph.D., Clemson University  
Assistant Professor, Mathematics

**Kristy S. Chunta**, Ph.D., West Virginia University  
Assistant Professor, Assistant Chairperson, Nursing and Allied Health Professions

**Richard A. Ciganko**, Ed.D., Illinois State University  
Associate Professor, Art

**Nicole A. Clark**, D.C.N., University of Medicine and Dentistry of New Jersey  
Assistant Professor, Food and Nutrition

**Christine M. Clewell**, D.M.A., University of Michigan-Ann Arbor  
Assistant Professor, Music

**Christopher B. Clouser**, M.S., Drexel University  
Assistant Professor, University Libraries

**Yong S. Colen**, Ed.D., Teachers College, Columbia University  
Associate Professor, Mathematics

**Kenneth S. Coles**, Ph.D., Columbia University  
Associate Professor, Geoscience

**William Z. Collins**, D.M.A., University of Southern California  
Assistant Professor, Music

**Susan M. Comfort**, Ph.D., University of Texas at Austin  
Associate Professor, English

**Francis J. Condino**, Ed.D., West Virginia University  
Associate Professor, Director, Intercollegiate Athletics

**Carol E. Connell**, M.L.S., University of Pittsburgh  
Assistant Professor, University Libraries

**Frank Corbett, Jr.**, Ed.D., Temple University  
Associate Professor, Professional Studies in Education

**Chauna J. Craig**, Ph.D., University of Nebraska-Lincoln  
Professor, English; Dean's Associate, College of Humanities and Social Sciences; Director, Women's Studies Program

**Maryanne M. Cramer**, M.Ed., The Pennsylvania State University  
Assistant Professor, Special Education and Clinical Services

**Anne D. Creany**, D.Ed., Indiana University of Pennsylvania  
Professor, Professional Studies in Education

**Susan S. Dahlheimer**, Ph.D., University of Pittsburgh  
Professor, Chairperson, Food and Nutrition

**Alfred M. Dahma**, Ph.D., University of Pittsburgh  
Assistant Professor, Mathematics

**Claire J. Dandeneau**, Ph.D., Purdue University  
Professor, Chairperson, Counseling

**Karen A. Dandurand**, Ph.D., University of Massachusetts  
Associate Professor, English

**Jean-Louis P. Dassier**, Ph.D., The Ohio State University  
Associate Professor, Foreign Languages

**Gary J. Dean**, Ph.D., The Ohio State University  
Professor, Chairperson, Adult and Community Education

**Debzani Deb**, Ph.D., Montana State University-Billings  
Assistant Professor, Computer Science

**Scott E. Decker**, J.D., University of Pittsburgh  
Assistant Professor, Employment and Labor Relations

**Sharon K. Deckert**, Ph.D., University of Arizona  
Assistant Professor, English

**Laura L. Delbrugge**, Ph.D., The Pennsylvania State University  
Associate Professor, Foreign Languages

**Hilary L. DeMane**, O.S., Culinary Institute of America  
Instructor, Culinary Arts

**Kimberly J. Desmond**, Ph.D., Kent State University  
Associate Professor, Counseling

**Sharon K. Deutschlander**, D.Ed., Indiana University of Pennsylvania  
Associate Professor, Health and Physical Education

**Portia Diaz-Martin**, M.L.S., Clarion University of Pennsylvania  
Assistant Professor, University Libraries

**Christian M. Dickinson**, D.M.A., Catholic University of America  
Professor, Music

**Cuong Q. Diep**, Ph.D., The Pennsylvania State University  
Assistant Professor, Biology

**Joseph W. Domaracki**, Ph.D., University of Pittsburgh  
Professor, Special Education and Clinical Services; Interim Associate Dean for Teacher Education

**H. Edward Donley**, Ph.D., Carnegie Mellon University  
Professor, Mathematics

**William R. Donner**, D. Phil., University of Delaware  
Assistant Professor, Sociology

**David E. Doverspike**, J.D., Ed.D., University of Akron  
Assistant Professor, Professional Studies in Education

**David B. Downing**, Ph.D., State University of New York at Buffalo  
Professor, English

**Rita G. Drapkin**, Ph.D., University of Pittsburgh  
Professor, Chairperson, Counseling Center

**Susan S. Drummond**, M.L.S., University of Pittsburgh  
Associate Professor, University Libraries

**Reena Dube**, Ph.D., University of Pittsburgh  
Associate Professor, English

**Joseph E. Duchamp**, Ph.D., Purdue University  
Assistant Professor, Biology

**Catherine M. Dugan**, Ed.D., Indiana University of Pennsylvania  
Associate Professor, Director, Advising and Testing Center

**James A. Dyal**, Ph.D., University of Illinois at Urbana-Champaign  
Professor, Economics

**Alan D. Eastman**, Ph.D., Florida State University  
Professor, Finance and Legal Studies

**Kevin E. Eisensmith**, D.M.A., Temple University  
Professor, Assistant Chairperson, Music

**Wendy L. Elcesser**, Ph.D., University of Vermont  
Associate Professor, Chemistry

**John M. Engler**, D.P.H., University of Pittsburgh  
Associate Professor, Safety Sciences

**Lea C. Evering**, Ph.D., Medical University of South Carolina  
Assistant Professor, Professional Studies in Education

**Sundararajan Ezekiel**, Ph.D., University of Pittsburgh  
Professor, Computer Science

**Justin D. Fair**, Ph.D., University of Connecticut  
Assistant Professor, Chemistry

**Waleed E. Farag**, Ph.D., Old Dominion University  
Professor, Computer Science

**Katherine Lee Farnsworth**, Ph.D., College of William and Mary  
Assistant Professor, Geoscience

**Anthony G. Farrington**, Ph.D., University of Nebraska-Lincoln  
Associate Professor, English

**Lynda M. Federoff**, Ph.D., West Virginia University  
Associate Professor, Psychology

**Lawrence M. Feldman**, Ph.D., State University of New York at Buffalo  
Professor, Mathematics

**Susan E. Fello**, Ed.D., Indiana University of Pennsylvania  
Associate Professor, Professional Studies in Education

**Beatrice S. Fennimore**, D.Ed., Columbia University  
Professor, Professional Studies in Education

**David A. Ferguson**, Ed.D., University of Illinois at Urbana-Champaign  
Associate Professor, Music

**Laura Sullivan Ferguson**, Ed.D., University of Illinois at Urbana-Champaign  
Associate Professor, Music

**Lon H. Ferguson**, D.Ed., University of Pittsburgh  
Professor, Chairperson, Safety Sciences

**Diane R. Ferrell**, Ph.D., University of Pittsburgh  
Associate Professor, Special Education and Clinical Services

**Dighton M. Fiddner**, Ph.D., University of Pittsburgh  
Assistant Professor, Political Science; Codirector, John P. Murtha Institute for Homeland Security

**Caleb P. Finegan**, Ph.D., University of Florida  
Associate Professor, History

**Gary D. Fitting**, A.S., Culinary Institute of America  
Instructor, IUP Academy of Culinary Arts

**Timothy B. Flowers**, Ph.D., Clemson University  
Assistant Professor, Mathematics

**Benjamin L. Ford**, Ph.D., Texas A & M University  
Assistant Professor, Anthropology

**John C. Ford**, Ph.D., Northeastern University  
Associate Professor, Chemistry

**Ivan J. Fortushniak**, M.F.A., University of Cincinnati  
Assistant Professor, Art

**Sharon M. Franklin-Rahkonen**, Ph.D., Indiana University Bloomington  
Associate Professor, History

**Thomas J. Frantz**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Professional Studies in Education

**Ronald F. Freda**, M.S., Case Western Reserve University  
Assistant Professor, Physics

**Erika Davis Frenzel**, Ph.D., University of Nebraska-Omaha  
Associate Professor, Criminology

**Terrence P. Fries**, Ph.D., University of Louisville  
Associate Professor, Computer Science

**Victor Q. Garcia**, Ph.D., University of California-Santa Barbara  
Professor, Anthropology

**Rajendar K. Garg**, Ph.D., University of Massachusetts  
Professor, Marketing

**Alan Gart**, Ph.D., University of Pennsylvania  
Professor, Finance and Legal Studies

**Robert P. Gendron**, Ph.D., Duke University  
Professor, Biology

**Thomas P. Gerber**, Ph.D., Duke University  
Assistant Professor, Geoscience

**Michele A. Gerwick**, Ph.D., University of Pittsburgh  
Associate Professor, Nursing and Allied Health Professions

**James E. Gibson**, Ph.D., Temple University  
Associate Professor, Religious Studies

**Dennis M. Giever**, Ph.D., Indiana University of Pennsylvania  
Professor, Criminology

**Andrew W. Gillham**, M.F.A., Michigan State University  
Associate Professor, Chairperson, Art

**Eileen W. Glisan**, Ph.D., University of Pittsburgh  
University Professor and Professor, Foreign Languages

**Susan J. Glor-Sheib**, Ph.D., University of Pittsburgh  
Professor, Special Education and Clinical Services

**Janet E. Goebel**, Ph.D., University of Nebraska-Lincoln  
Professor, English; Director, Robert E. Cook Honors College

**Beverly J. Goodwin**, Ph.D., University of Pittsburgh  
Professor, Psychology

**Philip B. Gordon**, Ph.D., The Ohio State University  
Assistant Professor, Human Development and Environmental Studies

**Jennifer L. Gossett**, Ph.D., University of Cincinnati  
Associate Professor, Criminology

**Julia A. Greenawalt**, Ph.D., University of Pittsburgh  
Assistant Professor, Nursing and Allied Health Professions

**Theresa M. Gropelli**, Ph.D., Duquesne University  
Assistant Professor, Nursing and Allied Health Professions

**Linwu Gu**, Ph.D., University of Mississippi  
Associate Professor, Management Information Systems and Decision Sciences

**Valerie J. Gunter**, Ph.D., Michigan State University  
Associate Professor, Sociology

**Lorraine J. Guth**, Ph.D., Indiana University Bloomington  
Professor, Counseling

**Ajawad Haija**, Ph.D., The Pennsylvania State University  
Professor, Physics

**Linda M. Hall**, Ed.D., Indiana University of Pennsylvania  
Associate Professor, Chairperson, Student Affairs in Higher Education

**Arden B. Hamer**, Ed.D., University of Pittsburgh  
Professor, Developmental Studies

**David I. Hanauer**, Ph.D., Bar Ilan University  
Professor, English

**Mary Anne Hannibal**, Ph.D., State University of New York at Buffalo  
Associate Professor, Professional Studies in Education; Director, Center for Teaching Excellence

**Kathleen J. Hanrahan**, Ph.D., Rutgers, The State University of New Jersey-New Brunswick Campus  
Professor, Assistant Chairperson, Criminology

**Derek R. Hatfield**, Ph.D., Ohio University  
Assistant Professor, Psychology

**Robert B. Heasley**, Ph.D., Cornell University  
Professor, Sociology

**D. Alex Heckert**, Ph.D., University of Iowa  
Professor, Chairperson, Sociology

**Kelly L. Heider**, D.Ed., Indiana University of Pennsylvania  
Associate Professor, University Libraries

**Patricia I. Heilman**, Ph.D., Indiana University of Pennsylvania  
Professor, Journalism

**Valeri R. Helderbran**, Ed.D., Duquesne University  
Professor, Professional Studies in Education

**Marion R. Henry**, M.A., Indiana University of Pennsylvania  
Assistant Professor, Human Development and Environmental Studies

**Tim G. Hibsman**, D.Ed., Pepperdine University  
Assistant Professor, English

**Melanie D. Hildebrandt**, Ph.D., Columbia University  
Assistant Professor, Sociology

**Robert D. Hinrichsen**, Ph.D., Indiana University Bloomington  
Associate Professor, Biology

**Mary Jane Kuffner Hirt**, Ph.D., University of Pittsburgh  
Professor, Political Science

**Richard J. Hoch**, Ph.D., West Virginia University  
Assistant Professor, Geography and Regional Planning

**Tawny L. Holm**, Ph.D., The Johns Hopkins University  
Professor, Religious Studies

**Janice L. Holmes**, Ph.D., University of Pittsburgh  
Associate Professor, Nursing and Allied Health Professions

**Ronald G. Horner**, D.M.A., West Virginia University  
Assistant Professor, Music

**Steven A. Hovan**, Ph.D., University of Michigan-Ann Arbor  
University Professor and Professor, Chairperson, Geoscience

**Richard Hsiao**, Ph.D., Florida State University  
Associate Professor, Health and Physical Education

**C. Mark Hurlbert**, D.A., State University of New York at Albany  
Professor, English

**Eun J. Hwang**, Ph.D., Virginia Polytechnic Institute and State University  
Assistant Professor, Human Development and Environmental Studies

**Mildred K. Hyde**, Ph.D., Southern Illinois University Carbondale  
Associate Professor, Management Information Systems and Decision Sciences

**Vida R. Irani**, Ph.D., University of Dayton  
Assistant Professor, Biology

**Martha J. Jack**, M.S., Indiana University of Pennsylvania  
Assistant Professor, Biology

**Sarah E. Jackson**, Ph.D., University of Illinois at Urbana-Champaign  
Assistant Professor, Economics

**Steven F. Jackson**, Ph.D., University of Michigan-Ann Arbor  
Professor, Political Science

**Mary R. Jalongo**, Ph.D., University of Toledo  
University Professor and Professor, Professional Studies in Education

**Christopher A. Janicak**, Ph.D., Loyola University Chicago  
Professor, Safety Sciences

**Sandra L. Janicki**, M.A., University of Pittsburgh  
Associate Professor, Chairperson, University Libraries

**Joann C. Janosko**, M.L.S., University of Pittsburgh  
Assistant Professor, University Libraries

**Melvin A. Jenkins**, D.Ed., Grambling State University  
Associate Professor, Educational Counselor, Chairperson,  
Developmental Studies

**Linda G. Jennings**, D.M.A., University of Texas at Austin  
Assistant Professor, Music

**Randy L. Jesick**, M.S.J., West Virginia University  
Assistant Professor, Chairperson, Journalism

**Crawford W. Johnson**, M.A., Atlanta University  
Associate Professor, Developmental Studies

**Rita M. Johnson**, Ph.D., The Pennsylvania State University  
Associate Professor, Food and Nutrition

**Shirley A. Johnson**, D.Ed., University of Pittsburgh  
Assistant Professor, Professional Studies in Education

**Tara L. Johnson**, Ph.D., West Virginia University  
Assistant Professor, Psychology

**Brian R. Jones**, M.F.A., University of Florida  
Professor, Chairperson, Theater and Dance

**James J. Jozefowicz**, Ph.D., State University of New York at Albany  
Professor, Economics

**Stephanie M. Brewer Jozefowicz**, Ph.D., Indiana University  
Bloomington  
Associate Professor, Economics

**Jack D. Julian**, Ph.D., University of Cincinnati  
Assistant Professor, Economics

**Liliana E. Jurewicz**, Ph.D., University of Iowa  
Associate Professor, Foreign Languages

**Irene Kabala**, Ph.D., The Johns Hopkins University  
Associate Professor, Art

**Krzysztof Z. Kaniasty**, Ph.D., University of Louisville  
Professor, Psychology

**Charles M. Kanyarusoke**, Ph.D., University of Pittsburgh  
Associate Professor, Communications Media

**John A. Kapusta**, M.A., Indiana University of Pennsylvania  
Instructor, Culinary Arts

**Nicholas Karatjas**, Ph.D., State University of New York at Stony Brook  
Professor, Chairperson, Economics

**Majid Karimi**, Ph.D., University of Oklahoma Norman Campus  
Professor, Physics

**Cathy C. Kaufman**, Ph.D., University of Pittsburgh  
Professor, Professional Studies in Education

**Richard J. Kemp**, M.A., Oxford University  
Associate Professor, Theater and Dance

**Gregory G. Kenning**, Ph.D., Michigan State University  
Associate Professor, Physics

**Jo Anne Kerr**, Ph.D., Indiana University of Pennsylvania  
Associate Professor, English

**Bitna Kim**, Ph.D., Sam Houston State University  
Assistant Professor, Criminology

**Elizabeth A. Kincade**, Ph.D., The Pennsylvania State University  
Associate Professor, Coordinator of Groups and Outreach and  
Counseling Psychologist, Counseling Center

**Michael G. Kingan**, D.M.A., University of North Texas  
Associate Professor, Music

**Germain P. Kline**, Ph.D., Walden University  
Associate Professor, Chairperson, Accounting

**Clifford H. Klinger**, A.A., Culinary Institute of America  
Instructor, IUP Academy of Culinary Arts

**Becky A. Knickelbein**, D.Ed., University of Pittsburgh  
Associate Professor, Chairperson, Special Education and Clinical  
Services

**Laura A. Knight**, Ph.D., Oklahoma State University  
Assistant Professor, Psychology

**Megan E. Knoch**, Ph.D., Kent State University  
Assistant Professor, Biology

**Blaine E. Knupp**, M.L.S., University of Pittsburgh  
Assistant Professor, University Libraries

**Jaegu Ko**, Ph.D., Northeastern University  
Associate Professor, Chemistry

**Anne E. Kondo**, Ph.D., University of Western Ontario  
Associate Professor, Chemistry

**Michael T. Kornis**, Ph.D., Indiana University of Pennsylvania  
Assistant Professor, Employment and Labor Relations

**Paul M. Kosicek**, Ph.D., Indiana University of Pennsylvania  
Assistant Professor, Management

**Robert M. Kostelnik**, Ph.D., University of Pittsburgh  
Associate Professor, Health and Physical Education

**Joseph F. Kovalski**, D.Ed., The Pennsylvania State University  
Professor, Educational and School Psychology

**Krish S. Krishnan**, Ph.D., University of Pittsburgh  
Professor, Marketing

**John W. Kuehn**, D.M.A., University of Colorado at Boulder  
University Professor and Professor, Music

**Christopher M. Kuipers**, Ph.D., University of California-Irvine  
Assistant Professor, English

**Keri S. Kulik**, Ph.D., University of Pittsburgh  
Assistant Professor, Health and Physical Education

**Yu-Ju Kuo**, Ph.D., Arizona State University  
Assistant Professor, Mathematics

**Lawrence Kupchella**, Ph.D., The Pennsylvania State University  
Assistant Professor, Chemistry; Coordinator, Natural Sciences Program

**Keith S. Kyler**, Ph.D., University of Wyoming  
Assistant Professor, Chemistry

**Amy L. Labant**, Ph.D., University of Pittsburgh  
Assistant Professor, Nursing and Allied Health Professions

**Charles H. Lake**, Ph.D., State University of New York at Buffalo  
Associate Professor, Chemistry

**Nadene A. L'Amoreaux**, Ph.D., Kent State University  
Associate Professor, Counseling

**David J. LaPorte**, Ph.D., Temple University  
Professor, Psychology

**Jeffery L. Larkin**, Ph.D., University of Kentucky  
Associate Professor, Biology

**Lynda L. LaRoche**, M.F.A., Indiana University Bloomington  
Associate Professor, Assistant Chairperson, Art

**John J. Lattanzio**, Ph.D., University of Pittsburgh  
Associate Professor, Mathematics

**Erick J. Lauber**, Ph.D., University of Michigan-Ann Arbor  
Associate Professor, Communications Media

**DeAnna M. Laverick**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Assistant Chairperson, Professional Studies in  
Education

**Carl R. LeBlond**, Ph.D., Seton Hall University  
Associate Professor, Chemistry

**Daniel R. Lee**, Ph.D., University of Maryland College Park  
Associate Professor, Criminology

**Mary Beth Leidman-Golub**, Ed.D., George Peabody College for  
Teachers, Vanderbilt University  
Professor, Communications Media

**James S. Lenze**, Ph.D., The Pennsylvania State University  
Professor, Communications Media

**John A. Lewis**, Ph.D., Indiana University of Pennsylvania  
Assistant Professor, Criminology

**Jonathan C. Lewis**, Ph.D., University of Connecticut  
Associate Professor, Geoscience

- Valerie S. Liberta**, M.F.A., University of Texas at Austin  
Assistant Professor, Theater and Dance
- Werner D. Lippert**, Ph.D., Vanderbilt University  
Assistant Professor, History; Codirector, John P. Murtha Institute for Homeland Security
- Sally A. Lipsky**, Ph.D., University of Pittsburgh  
Professor, Reading/Study Skills Specialist, Developmental Studies
- Shijuan Liu**, Ph.D., Indiana University Bloomington  
Assistant Professor, Foreign Languages
- Steven C. Loar**, M.A., Northern Illinois University  
Associate Professor, Art
- Mary Logan-Hastings**, D.M.A., University of Maryland Baltimore  
Associate Professor, Music
- Lori E. Lombard**, Ph.D., The Pennsylvania State University  
Professor, Special Education and Clinical Services
- Anson E. Long**, Ph.D., The Pennsylvania State University  
Assistant Professor, Psychology
- George R. Long**, Ph.D., Utah State University  
Professor, Assistant Chairperson, Chemistry
- David O. Loomis**, Ph.D., University of North Carolina at Chapel Hill  
Assistant Professor, Journalism
- Thomas R. Lord**, Ed.D., Rutgers, The State University of New Jersey–New Brunswick Campus  
Professor, Biology
- David G. Lorenzi**, D.Ed., West Virginia University  
Assistant Professor, Health and Physical Education
- John Wesley Lowery**, Ph.D., Bowling Green State University  
Associate Professor, Student Affairs in Higher Education
- Soo Chun Lu**, Ph.D., Ohio University  
Associate Professor, Assistant Chairperson, History
- Carl S. Luciano**, Ph.D., West Virginia University  
Professor, Chairperson, Biology
- Dasen Luo**, Ph.D., Case Western Reserve University  
Professor, Psychology
- J. Beth Mabry**, Ph.D., Virginia Polytechnic Institute and State University  
Associate Professor, Sociology
- Crystal Machado**, D.Ed., Arkansas State University  
Assistant Professor, Professional Studies in Education
- Mary C. MacLeod**, Ph.D., University of North Carolina at Chapel Hill  
Associate Professor, Chairperson, Philosophy
- Christoph E. Maier**, Ph.D., Oklahoma State University  
Assistant Professor, Mathematics
- Robert J. Major**, Ph.D., Rider University  
Assistant Professor, Biology
- Enric Mallorqui-Ruscalleda**, M.A., University of Western Ontario  
Assistant Professor, Foreign Languages
- Marjorie A. Mambo**, Ed.D., Teachers College, Columbia University  
Associate Professor, Art
- Joseph G. Mannard**, Ph.D., University of Maryland University College  
Assistant Professor, History
- Elizabeth A. Mansley**, Ph.D., University of Delaware  
Assistant Professor, Criminology
- Sarah J. Mantel**, D.M.A., University of Illinois at Urbana-Champaign  
Professor, Music
- Joseph F. Marcoline**, D.Ed., Indiana University of Pennsylvania  
Associate Professor, Professional Studies in Education
- John L. Marsden**, Ph.D., Ohio University  
Assistant Professor, Assistant Chairperson, English
- Laura E. Marshak**, Ph.D., University of Pittsburgh  
Professor, Counseling
- Jamie S. Martin**, Ph.D., Indiana University of Pennsylvania  
Professor, Criminology
- Randy L. Martin**, Ph.D., University of Nebraska-Lincoln  
Professor, Chairperson, Criminology
- Susan J. Martin**, Ph.D., Temple University  
Assistant Professor, Political Science
- David G. Martynuik**, Ph.D., Florida State University  
Associate Professor, Music
- Calvin O. Masilela**, Ph.D., Virginia Polytechnic Institute and State University  
Professor, Geography and Regional Planning
- Fuyuko Matsubara**, M.F.A., Cranbrook Academy of Art  
Associate Professor, Art
- Jeanine M. Mazak-Kahne**, Ph.D., Michigan State University  
Assistant Professor, History
- John T. McCarthy**, Ph.D., University of Missouri-Kansas City  
Professor, Counseling
- Sally M. McCombie**, Ph.D., University of Pittsburgh  
Associate Professor, Human Development and Environmental Studies
- Charles R. McCreary**, Ph.D., Northwestern University  
Associate Professor, Foreign Languages
- G. Patrick McCreary**, M.F.A., Mason Gross School of the Arts, Rutgers, The State University of New Jersey–New Brunswick Campus  
Assistant Professor, Theater and Dance
- Sean M. McDaniel**, Ph.D., University of Pennsylvania  
Professor, Chairperson, Foreign Languages
- Theresa R. McDevitt**, Ph.D., Kent State University  
Professor, University Libraries
- Nathan R. McElroy**, Ph.D., The Pennsylvania State University  
Associate Professor, Chemistry
- Mark R. McGowan**, Ph.D., Northern Arizona University  
Assistant Professor, Educational and School Psychology
- Maureen C. McHugh**, Ph.D., University of Pittsburgh  
Professor, Psychology
- Kevin F. McKee**, Ed.D., University of Tennessee, Knoxville  
Assistant Professor, Health and Physical Education
- Courtney L. McLaughlin**, Ph.D., Kent State University  
Assistant Professor, Educational and School Psychology
- William C. McPherson**, Ph.D., New York University  
Professor, Technology Support and Training
- William M. Meil**, Ph.D., Washington State University  
Professor, Psychology
- Scott E. Mensch**, Ph.D., Capella University  
Associate Professor, Technology Support and Training
- Alida V. Merlo**, Ph.D., Fordham University  
Professor, Criminology
- Mary L. Metz**, D.Ed., University of Pittsburgh  
Assistant Professor, Assistant Chairperson, Mathematics
- Joann M. Migyanka**, D.Ed. Indiana University of Pennsylvania  
Assistant Professor, Special Education and Clinical Services
- Jeffrey A. Miller**, M.S., The Pennsylvania State University  
Assistant Professor, Hospitality Management
- S. J. Miller**, Ph.D., University of New Mexico  
Associate Professor, English
- John A. Mills**, Ph.D., State University of New York at Buffalo  
Professor, Psychology
- Robert E. Millward**, Ed.D., The Pennsylvania State University  
Professor, Professional Studies in Education
- Brenda M. Mitchell**, Ph.D., University of Illinois at Urbana-Champaign  
Associate Professor, Art
- Robert S. Moore**, Ph.D., The Ohio State University  
Associate Professor, Chairperson, History
- Wayne A. Moore**, Ed.D., Temple University  
Professor, Technology Support and Training
- Kelli J. Kerry Moran**, Ph.D., Iowa State University  
Associate Professor, Professional Studies in Education
- Mary Kay Mortimer**, Ph.D., University of Pittsburgh  
Associate Professor, Nursing and Allied Health Professions
- Nurhaya Muchtar**, Ph.D., University of Tennessee, Knoxville  
Assistant Professor, Communications Media
- John A. Mueller**, Ed.D., Teachers College, Columbia University  
Associate Professor, Student Affairs in Higher Education
- Stanford G. Mukasa**, Ph.D., McGill University, Canada  
Associate Professor, Journalism
- Robert J. Mutchnick**, Ph.D., Florida State University  
Professor, Criminology
- David L. Myers**, Ph.D., University of Maryland College Park  
Professor, Criminology



**David M. Myers**, Ph.D., The Pennsylvania State University  
Assistant Professor, Counseling Center

**Ataollah Nahouraii**, Ph.D., University of Pittsburgh  
Professor, Management Information Systems and Decision Sciences

**Bharathan Narayanaswamy**, Ph.D., University of Maine at Orono  
Professor, Biology

**Channa Navaratna**, Ph.D., Texas Tech University  
Associate Professor, Mathematics

**Paul M. Nealen**, Ph.D., University of Pennsylvania  
Assistant Professor, Biology

**Frances A. Nee**, M.Ed., University of Pittsburgh  
Assistant Professor, Associate Director, Intercollegiate Athletics

**Phillip D. Neusius**, Ph.D., University of Missouri-Columbia  
Professor, Chairperson, Anthropology

**Sarah W. Neusius**, Ph.D., Northwestern University  
Professor, Anthropology

**Sandra J. Newell**, Ph.D., University of Toledo  
Professor, Assistant Chairperson, Biology

**Laurie N. Nicholson**, D.Ed., Indiana University of Pennsylvania  
Dean's Associate, College of Education and Educational Technology;  
Professor, Professional Studies in Education

**Jean Nienkamp**, Ph.D., The Pennsylvania State University  
Associate Professor, English

**Linda C. Norris**, Ph.D., University of Pittsburgh  
Professor, English

**Alvaro Nosedal-Sanchez**, M.S., University of New Mexico  
Assistant Professor, Mathematics

**Muhammad Z. Numan**, Ph.D., College of William and Mary  
Professor, Physics

**Andrew P. Nutter**, M.A., Indiana University of Pennsylvania  
Instructor, IUP Academy of Culinary Arts

**Timothy J. Nuttle**, Ph.D., Utah State University  
Assistant Professor, Biology

**William W. Oblitey**, Ph.D., University of Pittsburgh  
Professor, Chairperson, Computer Science

**Brian W. Okey**, Ph.D., University of Guelph, Canada  
Associate Professor, Geography and Regional Planning

**Therese D. O'Neil**, M.Ed., Indiana University of Pennsylvania  
Assistant Professor, Computer Science

**Christopher R. Orchard**, Ph.D., University of Oxford  
Associate Professor, English

**John N. Orife**, Ph.D., Michigan State University  
Associate Professor, Management

**Stephen W. Osborne**, Ph.D., University of Pittsburgh  
Professor, Management

**Terri D. Owens**, D.Ed., Northern Arizona University  
Assistant Professor, Human Development and Environmental Studies

**Gian S. Pagnucci**, Ph.D., University of Wisconsin-Madison  
University Professor and Professor, Chairperson, English

**Elizabeth A. Palmer**, Ph.D., Duquesne University  
Associate Professor, Chairperson, Nursing and Allied Health Professions

**Susan M. Palmisano**, M.F.A., University of Cincinnati  
Professor, Art

**Mark V. Palumbo**, Ph.D., Wright State University  
Assistant Professor, Psychology

**Jin Pang**, M.L.S., University of Pittsburgh  
Assistant Professor, University Libraries

**Pankaj Pankaj**, Ph.D., Southern Illinois University Carbondale  
Associate Professor, Chairperson, Management Information Systems  
and Decision Sciences

**Michele R. Papakie**, D.S.C., Robert Morris University  
Associate Professor, Journalism

**Kelli S. Reefer Paquette**, Ed.D., Wilmington College  
Associate Professor, Professional Studies in Education

**Mavis Pararai**, Ph.D., Central Michigan University  
Assistant Professor, Mathematics

**Gloria Park**, Ph.D., University of Maryland College Park  
Assistant Professor, English

**Allen R. Partridge**, Ph.D., Texas Tech University  
Associate Professor, Communications Media

**Madeline Paternostro-Bayles**, Ph.D., University of Pittsburgh  
Professor, Health and Physical Education

**Kevin J. Patrick**, Ph.D., University of North Carolina at Chapel Hill  
Professor, Geography and Regional Planning

**Raymond P. Pavloski**, Ph.D., McMaster University Hamilton, Canada  
Professor, Chairperson, Psychology

**C. Hans Pedersen**, Ph.D., University of South Florida  
Assistant Professor, Philosophy

**Virginia A. Perdue**, D.A., University of Michigan-Ann Arbor  
Associate Professor, English

**Daniel J. Perlongo**, M.M., University of Michigan-Ann Arbor  
Associate Professor, Music

**Shannon W. Phaneuf**, Ph.D., University of Maryland College Park  
Assistant Professor, Criminology

**Lynn A. Pike**, M.S., Indiana University of Pennsylvania  
Instructor, IUP Academy of Culinary Arts

**David M. Piper**, D.Ed., Indiana University of Pennsylvania  
Associate Professor, Chairperson, Employment and Labor Relations

**David H. Pistole**, Ph.D., Indiana State University  
Professor, Biology; Director, Liberal Studies

**Mark J. Piwinsky**, Ph.D., The Ohio State University  
Professor, Chairperson, Communications Media

**Michael A. Poage**, Ph.D., Dartmouth College  
Associate Professor, Geoscience

**Amanda B. Poole**, Ph.D., University of Washington  
Assistant Professor, Anthropology

**Susan G. Poorman**, Ph.D., University of Pittsburgh  
Professor, Nursing and Allied Health Professions

**Todd B. Potts**, Ph.D., University of Georgia  
Associate Professor, Economics

**Heather J. Huddleston Powers**, Ph.D., University of California-Irvine  
Associate Professor, English

**Lisa H. Price**, Ph.D., University of Georgia  
Associate Professor, Special Education and Clinical Services

**James J. Racchini**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Health and Physical Education

**Daniel P. Radelet**, Ph.D., University of Pittsburgh  
Assistant Professor, Mathematics

**Willard W. Radell**, Ph.D., University of Illinois at Urbana-Champaign  
Professor, Economics

**Catherine Raeff**, Ph.D., Clark University  
Professor, Assistant Chairperson, Psychology

**Bennett A. Rafoth**, Ed.D., University of Illinois at Urbana-Champaign  
University Professor and Professor, English

**Carl J. Rakhonon**, Ph.D., Indiana University Bloomington  
Professor, University Libraries

**Monsurur Rahman**, D.B.A., Southern Illinois University Carbondale  
Professor, Accounting

**Kris K. Ramassini**, Ph.D., University of Georgia  
Assistant Professor, Human Development and Environmental Studies

**Margaret C. Reardon**, Ph.D., Florida International University  
Assistant Professor, Psychology

**Edel M. Reilly**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Mathematics

**Laura H. Rhodes**, D.Ed., University of Pittsburgh  
Associate Professor, Safety Sciences

**Cynthia M. Richburg**, Ph.D., University of Tennessee, Knoxville  
Associate Professor, Special Education and Clinical Services

**Elizabeth A. Ricketts**, Ph.D., Emory University  
Assistant Professor, History

**Sue A. Rieg**, Ed.D., Duquesne University  
Professor, Chairperson, Professional Studies in Education

**Jeffrey A. Ritchey**, D.Ed., The Pennsylvania State University  
Associate Professor, Adult and Community Education

**José E. Rivera**, M.S., Old Dominion University  
Assistant Professor, Health and Physical Education

**Bradley K. Rives**, Ph.D., University of Maryland College Park  
Assistant Professor, Philosophy

**Jennifer J. Roberts**, Ph.D., University of Nebraska-Omaha  
Associate Professor, Criminology

**Donald U. Robertson**, Ph.D., Bowling Green State University  
Professor, Psychology

**Shari A. Robertson**, Ph.D., University of Wisconsin-Madison  
Professor, Special Education and Clinical Services; Dean's Associate,  
School of Graduate Studies and Research

**Penny M. Rode**, Ph.D., University of Pittsburgh  
Associate Professor, Art

**James A. Rodger**, D.B.A., Southern Illinois University Carbondale  
Professor, Management Information Systems and Decision Sciences

**Lydia H. Rodríguez**, Ph.D., University of Cincinnati  
Professor, Foreign Languages

**Laurie Roehrich**, Ph.D., University of South Florida  
Associate Professor, Psychology

**Eric W. Rosenberger**, Ph.D., The Pennsylvania State University  
Associate Professor, Counseling Center

**Beverly J. Rossiter**, M.N., University of Pittsburgh  
Assistant Professor, Nursing and Allied Health Professions

**Jennifer V. Rotigel**, D.Ed., Indiana University of Pennsylvania  
Professor, Professional Studies in Education

**Eric M. Rubenstein**, Ph.D., University of North Carolina at Chapel Hill  
Associate Professor, Philosophy

**Theresa R. Ruffner**, M.A., Indiana University of Pennsylvania  
Assistant Professor, Psychology

**Timothy J. Runge**, Ph.D., The Pennsylvania State University  
Assistant Professor, Educational and School Psychology

**Martha J. Rupert**, B.S., Indiana University of Pennsylvania  
Instructor, IUP Academy of Culinary Arts

**Marveta M. Ryan-Sams**, Ph.D., Harvard University  
Associate Professor, Foreign Languages

**Daniel D. Sadler**, Ph.D., University of Illinois at Urbana-Champaign  
Associate Professor, Psychology

**Nathan H. Santos**, O.M.D., University of Miami  
Instructor, Music

**Lilia P. Savova**, Ph.D., Sofia University (Bulgaria)  
Professor, English

**John F. Scandrett**, D.Ed., University of Pittsburgh  
Associate Professor, Music

**Steven P. Schroeder**, Ph.D., University of Pittsburgh  
Instructor, History

**Lisa M. Sciuilli**, Ph.D., University of Pittsburgh  
Professor, Marketing

**Brian A. Scudder**, J.D., State University of New York at Buffalo  
Associate Professor, Finance and Legal Services

**Gail S. Sechrist**, Ph.D., Louisiana State University and A&M College  
Associate Professor, Geography and Regional Planning

**Robert P. Sechrist**, Ph.D., Louisiana State University and A&M College  
Professor, Geography and Regional Planning

**Ronald F. See**, Ph.D., State University of New York at Buffalo  
Associate Professor, Chemistry

**Michael T. Sell**, Ph.D., University of Michigan-Ann Arbor  
Associate Professor, English

**Joyce A. Shanty**, Ph.D., West Virginia University  
Assistant Professor, Nursing and Allied Health Professions; Coordinator,  
Allied Health Professions Programs; Coordinator, Gerontology  
Certificate Program

**Varinder M. Sharma**, Ph.D., University of North Texas  
Professor, Marketing

**Brian D. Sharp**, Ph.D., University of Virginia  
Associate Professor, Mathematics

**Teresa C. Shellenbarger**, D.N.S., Widener University  
Professor, Nursing and Allied Health Professions

**Lynn B. Shelly**, Ph.D., University of Pittsburgh  
Assistant Professor, English

**Cora Lou Sherburne**, Ph.D., University of Kentucky  
Assistant Professor, Psychology

**Kenneth W. Sherwood**, Ph.D., State University of New York at Buffalo  
Associate Professor, English

**Diane S. Shinberg**, Ph.D., University of Wisconsin-Madison  
Assistant Professor, Sociology

**Stephen B. Shiring**, Ed.D., University of Pittsburgh  
Associate Professor, Hospitality Management

**Daniel C. Shively**, M.L.S., Drexel University  
Associate Professor, University Libraries

**Rosemary K. Shumba**, Ph.D., Birmingham University, Central England  
Professor, Computer Science

**Thomas W. Simmons**, Ph.D., Saint John's University  
Professor, Biology

**Wendy M. Sink**, M.S., Montana State University-Bozeman  
Assistant Professor, Special Education and Clinical Services

**Yaya Sissoko**, Ph.D., Southern Illinois University Carbondale  
Assistant Professor, Economics

**Helen C. Sitler**, Ph.D., Indiana University of Pennsylvania  
Associate Professor, English

**John F. Sitton**, Ph.D., Boston University  
Professor, Chairperson, Political Science

**Frederick J. Slack**, Ph.D., University of Pittsburgh  
Associate Professor, Management

**Thomas J. Slater**, Ph.D., Oklahoma State University  
Professor, English

**Mark A. Sloniger**, Ph.D., University of Georgia  
Associate Professor, Health and Physical Education

**David T. Smith**, Ph.D., Nova Southeastern University  
Assistant Professor, Computer Science

**Jonathan B. Smith**, Ed.D., Temple University  
Professor, Health and Physical Education

**Theresa S. Smith**, Ph.D., Boston University  
Professor, Religious Studies

**Dawn Marie Smith-Sherwood**, Ph.D., State University of New York at Buffalo  
Associate Professor, Foreign Languages

**Stanley J. Sobolewski**, Ph.D., State University of New York at Buffalo  
Associate Professor, Physics

**Ramesh G. Soni**, Ph.D., University of Texas at Arlington  
Professor, Chairperson, Management

**Jonathan N. Southard**, Ph.D., Utah State University  
Associate Professor, Chemistry

**Sharon Sowa**, Ph.D., Colorado State University  
Associate Professor, Chemistry

**John E. Stamp, Jr.**, D.M.A., Michigan State University  
University Professor and Professor, Chairperson, Music

**Jay Start**, Ph.D., University of Pittsburgh  
Associate Professor, Communications Media

**Mark J. Staszkiwicz**, Ed.D., University of Cincinnati  
Professor, Educational and School Psychology

**John H. Steelman**, Ph.D., University of Virginia  
Professor, Mathematics

**David W. Stein**, Ph.D., University of Pittsburgh  
Professor, Assistant Chairperson, Special Education and Clinical Services

**Karen G. Stein**, M.A., Kent State University  
Assistant Professor, Special Education and Clinical Services

**Margaret M. Stempien**, Ph.D., State University of New York at Buffalo  
Associate Professor, Mathematics

**Catherine R. Stephenson**, Ed.D., University of Pittsburgh  
Associate Professor, Educational Counselor, Developmental Studies

**Zachary J. Stiegler**, Ph.D., The University of Iowa  
Assistant Professor, Communications Media

**Rosalee M. Stilwell**, Ph.D., Bowling Green State University  
Associate Professor, English

**Gary S. Stoudt**, Ph.D., Lehigh University  
Professor, Mathematics

**Jin Su**, Ph.D., University of North Carolina at Greensboro  
Assistant Professor, Human Development and Environmental Studies

**Linda P. Sullivan**, M.B.A., California University of Pennsylvania  
Assistant Professor, Hospitality Management

**Peter M. Sullivan**, Ph.D., The Johns Hopkins University  
Associate Professor, Foreign Languages

**Melissa L. Swauger**, Ph.D., Duquesne University  
Assistant Professor, Sociology

**Robert W. Sweeny**, Ph.D., The Pennsylvania State University  
Associate Professor, Art

**Mary E. Swinker**, Ph.D., The Ohio State University  
Professor, Human Development and Environmental Studies

**Vincent P. Taiani**, Ph.D., State University of New York at Buffalo  
Associate Professor, Marketing

**Devki N. Talwar**, Ph.D., Allahabad University (India)  
University Professor and Professor, Chairperson, Physics

**Dan J. Tannacito**, Ph.D., University of Oregon  
Professor, English

**John F. Taylor**, Ph.D., University of Missouri-Columbia  
Professor, Geoscience

**Stephanie A. Taylor-Davis**, Ph.D., The Pennsylvania State University  
Professor, Food and Nutrition

**Todd N. Thompson**, Ph.D., University of Illinois at Chicago  
Assistant Professor, English

**Geoffrey Tickell**, Ph.D., Monash University, Australia  
Associate Professor, Accounting

**Monte G. Tidwell**, Ph.D., University of Pittsburgh  
Associate Professor, Professional Studies in Education

**Gwendolyn B. Torges-Hoffman**, Ph.D., University of Arizona  
Assistant Professor, Political Science

**Holly Jill Travis**, D.Ed., Indiana University of Pennsylvania  
Assistant Professor, Biology

**Frank A. Trenney**, M.S., Indiana University Bloomington  
Instructor, Intercollegiate Athletics

**Ronald L. Trenney**, M.Ed., The Pennsylvania State University  
Assistant Professor, Assistant Chairperson, Health and Physical Education

**Martha A. Troxell**, J.D., L.L.M. (Taxation), Temple University  
Professor, Finance and Legal Studies

**Kevin L. Turner**, M.F.A., Southern Illinois University Carbondale  
Assistant Professor, Art

**Mark G. Twiest**, Ph.D., University of Georgia  
Professor, Professional Studies in Education

**Meghan M. Twiest**, Ed.D., University of Georgia  
Professor, Professional Studies in Education

**Joan E. Van Dyke**, M.F.A., Arizona State University  
Associate Professor, Theater and Dance

**Thomas L. Van Dyke**, Ph.D., Virginia Polytechnic Institute and State University  
Associate Professor, Chairperson, Hospitality Management

**Todd A. Van Wieren**, Ph.D., Virginia Commonwealth University  
Assistant Professor, Advising and Testing Center

**Judith H. Villa**, Ph.D., University of New Mexico  
Associate Professor, English

**Jana Lynn Villemain**, Ph.D., Texas A & M University  
Assistant Professor, Chemistry

**Jan Keith Wachter**, M.A., Wheeling Jesuit University  
Associate Professor, Safety Sciences

**Therese M. Wacker**, D.M.A., The Ohio State University  
Associate Professor, Music

**Diane C. Wagoner**, M.S., Indiana University of Pennsylvania  
Assistant Professor, Food and Nutrition

**Janet M. Walker**, Ph.D., Oregon State University  
Professor, Mathematics

**Irene L. Wallaert**, M.A., Northwestern University  
Assistant Professor, Foreign Languages

**Danhua Wang**, Ph.D., Oakland University  
Assistant Professor, Developmental Studies

**Jianfeng Wang**, Ph.D., University of Mississippi  
Associate Professor, Management Information Systems and Decision Sciences

**Xi Wang**, Ph.D., Teachers College, Columbia University  
Professor, History

**Yasong (Alex) Wang**, Ph.D., The Pennsylvania State University  
Assistant Professor, Hospitality Management

**Veronica T. Watson**, Ph.D., Rice University  
Associate Professor, English

**Gabriela Wasileski**, M.A., University of Delaware  
Assistant Professor, Criminology

**Dey W. Watts**, Ph.D., Virginia Polytechnic Institute and State University  
Assistant Professor, Geography and Regional Planning

**Kim Weiner**, Ph.D., University of Pittsburgh  
Associate Professor, Counseling Center

**James E. Welker**, M.B.A., University of Pittsburgh  
Assistant Professor, Finance and Legal Studies

**Susan E. Welsh**, Ph.D., Drew University  
Associate Professor, English

**Edith A. West**, Ph.D., Prifysgol Bangor University/UK  
Assistant Professor, Nursing and Allied Health Professions

**Susan E. Wheatley**, Ph.D., University of Michigan-Ann Arbor  
Professor, Music

**Sarah M. Wheeler**, Ph.D., University of Pittsburgh  
Associate Professor, Political Science

**Tamara L. Whited**, Ph.D., University of California-Berkeley  
Associate Professor, History

**Kustim Wibowo**, Ph.D., University of Kentucky  
Professor, Management Information Systems and Decision Sciences

**Harrison Wick**, M.L.S., Indiana University  
Assistant Professor, Libraries

**Vythilingam Wijekumar**, Ph.D., The Ohio State University  
Professor, Physics

**Leann Wilkie**, Ed.D., Texas Tech University  
Associate Professor, Chairperson, Technology Support and Training

**Mary E. Williams**, Ph.D., Case Western Reserve University  
Professor, Nursing and Allied Health Professions; Director, Academic Planning and Assessment

**Michael M. Williamson**, Ph.D., State University of New York at Buffalo  
Professor, English

**Michael T. Williamson**, Ph.D., Rutgers, The State University of New Jersey-New Brunswick Campus  
Associate Professor, English

**Lucinda L. Willis**, Ph.D., Virginia Polytechnic Institute and State University  
Associate Professor, Technology Support and Training

**B. Gail Wilson**, Ph.D., University of Pittsburgh  
Professor, Communications Media

**Ray L. Winstead**, Ph.D., North Carolina State University  
Professor, Biology

**Gregory A. Wisloski**, Ph.D., University of Pittsburgh  
Associate Professor, Mathematics

**Joette M. Wisnieski**, Ph.D., University of Georgia  
Associate Professor, Management

**Robert I. Witchel**, Ed.D., University of Georgia  
Professor, Counseling

**Dana Hysock Witham**, Ph.D., University of Delaware  
Assistant Professor, Sociology

**Heide Witthoeft**, Ph.D., University of Oregon  
Associate Professor, Foreign Languages

**Ronald J. Woan**, Ph.D., Florida State University  
Associate Professor, Accounting

**Henry Wong Doe**, D.M.A., The Juilliard School  
Assistant Professor, Music

**John C. Woolcock**, Ph.D., University of California-Riverside  
Professor, Chairperson, Chemistry

**Jason W. Worzbyt**, D.M.A., University of North Texas  
Professor, Music

**Albert S. Wutsch**, A.O.S., Culinary Institute of America  
Assistant Professor, Chairperson, Culinary Arts

**Mindy L. Wygonik**, Ed.D., University of Pittsburgh  
Assistant Professor, IUP Academy of Culinary Arts

**Lingyan Yang**, Ph.D., University of Massachusetts  
Associate Professor, English

**David B. Yerger**, Ph.D., The Pennsylvania State University  
Associate Professor, Economics

**Kwasi Yirenyi**, Ph.D., University of Pittsburgh  
Professor, Religious Studies

**Nancy J. Yost**, Ph.D., The Pennsylvania State University  
Professor, Special Education and Clinical Services

**Keith R. Young**, D.M.A., University of Maryland College Park  
Professor, Music

**Marjorie J. Zambrano-Paff**, Ph.D., University of Pittsburgh  
Assistant Professor, Foreign Languages

**Jun-Lue (John) Zhang**, Ph.D., Syracuse University  
Professor, Mathematics

**Feng Zhou**, Ph.D., Shanghai Institute of Optics and Fine Mechanics  
Associate Professor, Physics

**Cynthia K. Zidek**, Ph.D., Indiana University of Pennsylvania  
Assistant Professor, Nursing and Allied Health Professions

**Susan T. Zimny**, Ph.D., University of Colorado at Boulder  
Professor, Psychology

**Nashat M. Zuraikat**, Ph.D., University of Pittsburgh  
Professor, Nursing and Allied Health Professions

### **Adjunct Faculty, Clinical Laboratory Science**

---

#### **Altoona Regional Health System**

*Director:* **Americo B. Anton**, M.D.

*Program Director:* **Joseph R. Noel**, B.S., York College

#### **Clinical Laboratory Science Program, St. Christopher's Hospital for Children**

*Medical Director:* **Judy Mae E. Pascasio**, M.D., University of the Philippines College of Medicine

*Program Director:* **Leah Beck**, M.T. (ACSP); C.L.S. (NCA); M.P.H., Thomas Jefferson University

#### **Clinical Laboratory Science Program, York Hospital**

*Medical Director:* **Abby W. Davis**, M.D., The Pennsylvania State University

*Program Director:* **Carolyn S. Darr**, M.T. (ACSP); M.A., Central Michigan University

#### **Cooperative Medical Technology Program of Akron, Children's Hospital Medical Center, Akron, Ohio**

*Medical Director:* **Robert W. Novak**, M.D., Duke University

*Program Director:* **Sharon K. Shriber**, M.T. (ASCP) S.H.; M.B.A., The University of Akron

#### **School of Clinical Laboratory Science, The Reading Hospital and Medical Center**

*Program Director:* **Deborah Evans**, M.Ed., H.T., M.T. (ACSP), S.M. (NRCM)

#### **School of Clinical Laboratory Science, Williamsport Hospital and Medical Center**

*Medical Director:* **Willem Lubbe**, M.D., University of Cape Town, Cape Town, South Africa

*Program Director:* **Ed Beitz**, C.L.S. (NCA); M.T. (ASCP); M.T. (HHS); M.H.A., University of St. Francis

#### **School of Medical Technology, Lancaster General College of Nursing and Health Sciences**

*Medical Director:* **James T. Eastman III**, M.D., University of Cincinnati College of Medicine

*Program Chair:* **Marie E. Woods**, M.T. (ASCP); M.S., Indiana University of Pennsylvania

#### **School of Medical Technology, Memorial Medical Center**

*Medical Director:* **Sidney Goldblatt**, M.D., Temple University

*Program Director:* **Theresa McCreary**, M.T. (ASCP) S.H.; M.S., Mount Aloysius College

#### **School of Medical Technology, St. Vincent Health Center**

*Medical Director:* **Kenneth H. Jurgens**, M.D., State University of New York at Downstate

*Program Director:* **Stephen M. Johnson**, M.T. (ASCP); M.S., The Ohio State University

#### **School of Medical Technology, WCA Hospital**

*Medical Director:* **William A. Geary**, M.D., University of Virginia School of Medicine

*Program Director:* **Michele Harms**, M.T. (ASCP); M.S., State University of New York at Fredonia

### **Adjunct Faculty, Nuclear Medicine Technology**

---

#### **Nuclear Medicine Institute, The University of Findlay**

*Program Director:* **Rick States**, R.T. (N), C.N.M.T.; D.H.Sc., Nova Southeastern University

*Assistant Program Director:* **Elaine M. Markon**, R.T. (N), C.N.M.T.; M.S., Ohio University

#### **Nuclear Medicine Technology, Community College of Allegheny County, Allegheny Campus**

*Program Director:* **Carl Mazzetti**, A.R.R.T. (N), C.N.M.T. (NMTCB), B.S., Geneva College

### **Adjunct Faculty, Respiratory Care**

---

#### **School of Respiratory Care, Western Pennsylvania Hospital**

*Director:* **William J. Malley**, R.R.T., C.P.F.T.; M.S., University of Pittsburgh

*Medical Director:* **Paul Fiehler**, F.C.C.P.; M.D., University of Pittsburgh

*Director of Clinical Education:* **Kathryn G. Kinderman**, R.R.T., C.P.F.T.; M.S., University of Pittsburgh

*Instructors:*

**Carla Conrad**, R.R.T., B.S., Indiana University of Pennsylvania

**Jeffrey A. Heck**, R.R.T.; C.P.F.T.; M.S., University of Pittsburgh

**Jackie Heisler**, R.R.T.; Ph.D., Capella University

### **Adjunct Faculty, Athletic Training/Sports Medicine**

---

#### **Physicians**

##### **Center for Orthopaedics and Sports Medicine**

**David T. Bizousky**, M.D., Hahnemann University, School of Medicine

**Douglas S. Fugate**, M.D., Hahnemann University of Health Sciences

**Craig C. McKirgan**, D.O., University of Osteopathic Medicine and Health Sciences

**Howard P. Miller**, D.P.M., Ohio College of Podiatric Medicine

**Jagadeesha Shetty**, M.D., Government Medical College, Bellary, India

#### **Allied Medical Staff**

**Cory E. Barton**, A.T.C.; B.S., Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Blairsville-Saltsburg School District

**Scott T. Bauer**, A.T.C.; B.S., Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Indiana School District

**Richard D. Beninghof**, M.S., Northern Michigan University

IUP Sports Medicine Clinic

**Jodi Friguglinetti**, A.T.C.; M.S., California University of Pennsylvania

Keystone Rehabilitation Systems/Homer-Center School District

**Alan M. Keefe**, P.A.-C, Duquesne University

Center for Orthopaedics and Sports Medicine

**Christa L. Pontani**, C.R.N.P., Duquesne University

Center for Orthopaedics and Sports Medicine

**Dennis Shultz**, P.T.; M.S., University of Pittsburgh

Keystone Rehabilitation Systems

**Matthew Wilson**, A.T.C.; B.S., Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Blairsville-Saltsburg School District

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**Mathematics Education**

The program leading to the B.S.Ed. with a major in Mathematics Education prepares the student for teaching mathematics in Grades 7-12. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

**NOTE: The program requirements for the Mathematics Education program were mistakenly omitted from this year's catalog. These requirements are listed below.**

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**Bachelor of Science in Education–Mathematics Education (\*)**

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications: 48

**Mathematics:** MATH 125

**Social Science:** PSYC 101

**Liberal Studies Electives:** 3cr, no courses with MATH prefix

**College:** 31

**Preprofessional Education Sequence:**

COMM 103 Digital Instructional Technology 3cr

EDSP 102 Educational Psychology 3cr

**Professional Education Sequence:**

EDEX 301 Education of Students with Disabilities in Inclusive Secondary Settings 2cr

EDEX 323 Instruction of English Language Learners with Special Needs 2cr

EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures 3cr

EDUC 242 Pre-Student Teaching Clinical Experience I 1cr

EDUC 342 Pre-Student Teaching Clinical Experience II 1cr

EDUC 441 Student Teaching 12cr

EDUC 442 School Law 1cr

EDUC 456 Teaching Math in the Secondary Schools 3cr

**Major:** 36

**Required Courses:**

MATH 126 Calculus II/Physics, Chemistry, Mathematics 3cr

MATH 171 Introduction to Linear Algebra 3cr

MATH 216 Probability and Statistics for Natural Sciences 3cr

MATH 225 Calculus III/Physics, Chemistry, Mathematics 3cr

MATH 271 Introduction to Mathematical Proofs I 3cr

MATH 272 Introduction to Mathematical Proofs II 3cr

MATH 340 Principles of Secondary School Mathematics 3cr

MATH 350 History of Mathematics 3cr

MATH 353 Theory of Numbers 3cr

MATH 355 Foundations of Geometry I 3cr

MATH 430 Seminar in Teaching Secondary School Mathematics 3cr

MATH 460 Technology in Mathematics Instruction 3cr

**Other Requirements:** 3

COSC 110 Problem Solving and Structured Programming 3cr

**Free Electives:** 4

**Total Degree Requirements:** 122

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

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