



UNDERGRADUATE CATALOG

2017-2018

Indiana University of Pennsylvania is committed to equal opportunity and affirmative action for its students, employees, and applicants. The university is committed to providing equal educational and employment rights to all persons without regard to race, color, sex, religion, national origin, sexual orientation, age, disability, or veteran's status. Each member of the university community has a right to study and work in an environment free from any form of racial, ethnic, and sexual discrimination. In accordance with federal and state laws, the university will not tolerate racial or ethnic discrimination or discrimination on the basis of disability.

This policy is placed in this document in accordance with state and federal laws including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the Civil Rights Act of 1991, as well as all applicable federal and state executive orders. This policy extends to disabled veterans and veterans of the Vietnam era.

Title IX

Indiana University of Pennsylvania and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the university requires faculty members to report incidents of sexual violence shared by students to the University's Title IX Coordinator. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a university-approved research project.

Faculty members are obligated to report sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred to the Department of Human Services, at 1-800-932-0313, and University Police, at 724-357-2141.

Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at: www.iup.edu/socialequity/policies/title-ix

Please direct all general inquiries regarding equal opportunity and affirmative action to

Office of Social Equity
Delaney Hall, Suite B17
920 Grant Street
Indiana, PA 15705
Telephone: 724-357-3402
Fax: 724-357-3404

TD: Telecommunications Device available in the

Department for Disability Access and Advising, 724-357-4067 (V/TD)
(8:00 a.m.-4:30 p.m., Monday through Friday)

IUP ensures compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act through the provision of program access accommodations. Please direct inquiries regarding accommodations for persons with disabilities to:

Student Concerns:

Director, Department for Disability Access and Advising
504 Coordinator/ADA Student Concerns Coordinator
201 Pratt Dr., Room 216
Indiana, PA 15705
Telephone: 724-357-4067

Employee Concerns:

Office of Human Resources
G-8 Sutton Hall
1011 South Drive
Indiana, PA 15705
Telephone: 724-357-2431
Fax: 724-357-2685

Specific inquiries regarding Title IX should be directed to:

Office of Social Equity
Delaney Hall, Suite B17
920 Grant Street
Indiana, PA 15705
Telephone: 724-357-3402
Fax: 724-357-3404

The university publishes an online student handbook, *The Source: A Student Policy Guide*, which is a companion to this catalog. The handbook contains detailed information on the policies mentioned on this page. It is accessible to all enrolled students at: www.iup.edu/studentconduct/thesource.

Questions regarding the Sexual Harassment and Sexual Violence Policy or complaint procedures, should be directed to:

Title IX Coordinator
Delaney Hall, Suite B17
Indiana, PA 15705
Telephone: 724-357-3402.

The IUP Sexual Harassment and Sexual Violence Policy is accessible at the website iup.edu/socialequity/policies/sexual-harassment-and-sexual-violence/.

This bulletin contains announcements of courses for the academic year 2017-18. IUP reserves the right to repeal, change, or amend the rules, regulations, courses, and programs contained in this bulletin at any time. Tuition and fees are also subject to change.

IUP Civility Statement

As a university of different peoples and perspectives, IUP aspires to promote the growth of all people in their academic, professional, social, and personal lives. Students, faculty, and staff join together to create a community where people exchange ideas, listen to one another with consideration and respect, and are committed to fostering civility through university structures, policies, and procedures. We, as members of the university, strive to achieve the following individual commitments:

- *To strengthen the university for academic success*, I will act honestly, take responsibility for my behavior and continuous learning, and respect the freedom of others to express their views.
- *To foster an environment for personal growth*, I will honor and take care of my body, mind, and character. I will be helpful to others and respect their rights. I will discourage intolerance, hatred, and injustice and promote constructive resolution of conflict.
- *To contribute to the future*, I will strive for the betterment of the community: myself, my university, the nation, and the world.

IUP is one of the largest members of Pennsylvania's State System of Higher Education, and it was the first one of the State System schools to grant doctoral degrees.

For information about the System and its other member universities, visit www.passhe.edu.



Indiana University of Pennsylvania 2017-18 Undergraduate Catalog

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Online version: www.iup.edu/registrar/catalog

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Undergraduate Degrees Offered at IUP

Bachelor of Arts

- **Anthropology** (Tracks available: Applied Anthropology, Archaeology, General Anthropology, Honors)
- **Art/History Track**
- **Art/Studio**
- **Asian Studies** (Honors Track available)
- **Biology** (Honors Track available)
- **Computer Science**
- **Criminology** (Pre-law Track available)
- **Economics** (Tracks available: Honors and Pre-law)
- **English** (Tracks available: Literature/Culture, Writing Studies, Honors, Pre-law)
- **Geography** (Concentrations available: Economic Geographer, Energy Geotechnology/Energy Environmental Compliance, Environmental Geographer, General Geography, GIS and Cartographer, Honors)
- **General Studies**
- **History** (Tracks available: Honors and Pre-law)
- **Interdisciplinary Fine Arts/Dance Arts Track**
- **International Studies/Political Science**
- **Journalism and Public Relations**
- **Music**
- **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: General Sociology, Human Services, Sociology of Disability Services, Honors)
- **Spanish** (Honors Track available)
- **Theater** (Musical Theater Track available)

Bachelor of Science in Education

- **Art Education** (Honors Track available)
- **Biology Education** (Honors Track available)
- **Business Education** (Honors Track available)
- **Chemistry Education** (Honors Track available)
- **Early Childhood Education/Master of Education-Literacy** (Honors Track available)
- **Early Childhood Education/Special Education** (Tracks available: Urban and Honors)
- **Earth and Space Science Education** (Honors Track available)
- **English Education** (Honors Track available)
- **K-12 Family and Consumer Sciences Education** (Honors Track available)
- **Health and Physical Education/K-12 Teacher Education** (Honors Track available)
- **Health and Physical Education/Community Health Education** (Does not include K-12 Teacher Education Certification)
- **Health and Physical Education/Recreation and Leisure Studies** (Does not include K-12 Teacher Education Certification)
- **Mathematics Education** (Honors Track available)
- **Middle-Level Education 4-8** (Specializations available: English/Language Arts, Mathematics, Science, Social Studies) (Honors Track available)
- **Music Education** (Honors Track available)
- **Physics Education** (Honors Track available)
- **Social Science Education** (Concentrations available: Anthropology, Sociology) (Honors Track available)
- **Social Studies Education** (Tracks available: Economics, Geography, History, Honors)
- **Spanish Education K-12** (Honors Track available)
- **Special Education** (Honors Track available)
- **Vocational-Technical Education** (Honors Track available)

Bachelor of Science

- **Accounting**
- **Athletic Training**
- **Biochemistry**
- **Biology** (Tracks available: Cell and Molecular Biology; Ecology, Conservation, and Environmental Biology; Environmental Health; Pre-medical; Pre-veterinary; Honors)
- **Chemistry** (Tracks available: Interdisciplinary Chemistry, Pre-medical, and Pre-pharmacy)
- **Child Development and Family Relations**
- **Clinical Laboratory Science**
- **Communications Media** (Tracks Available: Media Marketing, Media Production, Media Studies)
- **Computer Science/Cyber Security Track**
- **Computer Science/Languages and Systems Track**
- **Computer Science/Software Engineering Track**
- **Disability Services**
- **Environmental Engineering**
- **Fashion Merchandising**
- **Finance**
- **Geology** (Tracks available: Geology, Energy Resources, Environmental)
- **Hospitality Management**
- **Human Resource Management**
- **Interior Design**
- **International Business**
- **Management** (Tracks available: General Management, Energy Accounting and Finance, Energy Management, Entrepreneurship and Small Business Management, Supply Chain Management, Professional Land Resource Management)
- **Management Information Systems/Information Systems Track**
- **Management Information Systems/Information Technology Track**
- **Marketing**
- **Mathematics** (Tracks available: Actuarial, Applied Mathematics)
- **Natural Science** (Tracks available: Pre-audiology, Pre-chiropractic, Pre-dentistry, Pre-optometry, Pre-pharmacy, Pre-physical Therapy, Pre-physician Assistant, Pre-podiatry)
- **Nuclear Medicine Technology**
- **Nursing** (Licensed Practical Nurse Track available)
- **Nutrition/Dietetics Track**
- **Nutrition/Culinary Dietetics Track**
- **Nutrition/Nutrition Track**
- **Physical Education and Sport** (Programs available: Exercise Science, Pre-Athletic Training, Sport Administration)
- **Physics** (Tracks available: Applied Physics, Nanomanufacturing Technology, Pre-engineering)
- **Public Health** (Tracks available: Environmental and Occupational Health, Behavioral and Mental Health, and Epidemiology and Biostatistics)
- **Regional Planning** (Concentrations available: Environmental Planner, Land Use Planning and GIS, Honors)
- **Respiratory Care** (Certified Respiratory Therapist Track available)
- **Safety, Health, and Environmental Applied Sciences**
- **Speech-Language Pathology and Audiology**

Bachelor of Fine Arts

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

Associate of Arts

- **General Studies**

President's Message

If you're a student using the print version of the Undergraduate Catalog, the book you hold is quite valuable. Think of it as the user's manual to your degree program.

Despite its plainness, the catalog contains the essence of the academic experience 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 symbolizes that the university as a whole has met very exacting standards. Middle States accreditation demands that IUP must participate in periodic, ongoing reviews in order to maintain the affirmation it has received in the form of accreditation—most recently in 2016. For you, that means the experience you have chosen for your undergraduate education has been vetted and scrutinized by experts in the field.

More than two dozen of IUP's individual academic programs also are accredited by leading organizations. These include programs in the Eberly College of Business and Information Technology, which are accredited by the Association to Advance Collegiate Schools of Business, and programs in the IUP College of Education and Communications, which are accredited by the Council for the Accreditation of Educator Preparation. 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 recognition by others. It speaks for itself. The graduate of an accredited institution or program is regarded as having achieved a certain level of knowledge and competence—a quality that both employers and graduate schools find desirable.

Since its founding as a normal school 142 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 high academic standards endures.

Michael A. Driscoll
President



University Calendar

For the latest academic calendar information, please visit the website www.iup.edu/academiccalendar.

Fall Semester 2017

Classes begin	August 28
Labor Day break (no classes)	September 4
Thanksgiving recess	November 20-24
Classes resume (8:00 a.m.)	November 27
Classes end (end of day)	December 11
Final exams	December 12–15
Commencement	December 16

Spring Semester 2018

Classes begin	January 22
Spring recess	March 12-17
Classes resume (8:00 a.m.)	March 19
Classes end (end of day)	May 4
Final exams	May 7–10
Commencement—Graduate	May 11
Commencement—Undergraduate	May 12

Winter Session 2017–18

December 21 through January 12
(No classes December 25 and January 1)

Summer Sessions 2018

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

Chancellor, Pennsylvania's State System of Higher Education

Frank T. Brogan

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Two vacancies

The University

A University Education

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 Pennsylvania's 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.

Vision for IUP's Future

Indiana University of Pennsylvania is a community where teaching, research, and service empower students to become innovative leaders while enhancing communities throughout the world. Remaining true to its traditions, IUP assesses society's needs and opportunities and meets them.

Students are hardworking, ready to learn, and come from diverse cultures, places, and backgrounds. Energetic, dedicated, and diverse staff and faculty members welcome them to a personal, vibrant college home. Students participate in many intentional and interconnected learning experiences in their studies, in their lives, and in the world.

Professors are active scholars and teachers in their disciplines who work together to expand their impact. They engage students in carefully designed open-ended, hands-on experiences to reinforce and enrich what students learn in the classroom. Professors use technology to enhance student learning and augment the face-to-face and peer-learning experiences that are the foundation of excellent education.

Alumni say their student experience was the best preparation for work and life. They continue to find joy in the bonds they built as students and the new connections they make with faculty and staff members, students, and other alumni. They are proud, and they choose to invest in IUP's future.

IUP Values

- Demonstrating an excellent return on educational investment
- Knowing students as individuals who work closely with faculty and staff members
- Responding to the needs of students and society with a range of innovative programs and scholarship
- Employing evidence in decision making and in demonstrating results
- Drawing on IUP's tradition in Indiana and western Pennsylvania to serve students worldwide
- Enjoying historic, inspirational, and functional campuses and facilities
- Using technology to reach place-committed students and enhance learning for all
- Celebrating engaged, successful alumni

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/strategic-planning.

History of the University

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 one of Pennsylvania's largest universities. The current enrollment is 13,775, with students from 44 states and more than 60 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. In 1969, the first doctoral program was initiated.

Current academic offerings include more than 130 undergraduate programs with a variety of internship and study abroad programs, more than 50 master's degree programs, and 11 doctoral programs. Unusual opportunities for research at all levels and the 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

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*; *New York Times*; *Money* magazine; and *US News and World Report*. Here are some of those reasons:

- **Breadth of high-quality programs:** Undergraduates can choose from more than 130 programs. IUP also offers more than 60 graduate programs, including 11 doctoral programs. Students can challenge themselves with honors programs in almost every major or attend the nationally renowned 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 an 17-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/research in other countries. Faculty research wins sponsorship by major institutions such as the National Science Foundation, NASA, Centers for Disease Control and Prevention, and US 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 the opportunities a big city offers.
- **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 250 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 11 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, about 82 percent of IUP undergraduate students receive financial assistance in one form or another.

University Governance

Indiana University of Pennsylvania is one of 14 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 ensuring 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.

Because of 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 members, students, and administrators who are elected and appointed by their peers.

Many of the important policies governing the working and learning environment, such as the policy on sexual harassment and sexual violence, the academic integrity policy, and the policy on nondiscrimination, are given in this catalog or the student handbook (*The Source: A Student Policy Guide*) and are also available at www.iup.edu. To ensure a nurturing environment where all faculty members, 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

IUP is a state-owned institution for higher education and a member of Pennsylvania's State System of Higher Education. It holds university-wide regional accreditation through the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104, telephone: 267-284-5000, website: www.msche.org.

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

- Accreditation Commission for Programs in Hospitality Administration
- Accreditation Council for Education in Nutrition and Dietetics
- American Association for Health Education
- American Council on the Teaching of Foreign Languages
- American Culinary Federation Educational Foundation
- American Dietetic Association
- American Psychological Association
- American Speech-Language-Hearing Association
- Applied and Natural Science Accreditation Commission of ABET
- Association to Advance Collegiate Schools of Business
- Association for Childhood Education International
- Commission on Accreditation of Allied Health Education and Programs
- Commission on Accreditation for Respiratory Care
- Commission on Accreditation of Athletic Training Education
- Commission on Collegiate Nursing Education
- Computing Accreditation Commission (CAC) of ABET
- Council for Exceptional Persons
- Council for Accreditation of Counseling and Related Educational Programs
- Educational Leadership Constituent Council
- International Reading Association
- 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 Accreditation of Teacher Education (NCATE)
- National Council for Social Sciences
- National Council of Teachers of Mathematics
- Pennsylvania Department of Education-Vocational Division
- Planning Accreditation Board

See the website www.iup.edu/academicaffairs/resources for the most current listing.

Indiana, the County and the Town

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 3,000 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

With an alumni base that comprises more than 140,000 individuals, the university has come to rely on the support of its alumni in a variety of areas. These include career networking, student recruitment, speaking to classes, and mentoring students, as well as service on the Alumni Association 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.alumni.iup.edu and through periodicals like *IUP Magazine*.

Buildings and Grounds

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 65 major buildings with over 4 million square feet of usable space. 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 residential revival housing project to enhance the campus's living-learning environment. In addition, the Kovachick Convention and Athletic Complex opened in March 2011.

IUP also owns and operates four residential and 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.

The IUP at Northpointe Regional Campus in Armstrong County, formally called the John P. Murtha Center for Education and Workforce Development, provides facilities for 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.

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. Technical support is available at the IT Support Center via website www.iup.edu/ITSupportCenter, via e-mail to 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 intended to support specific programs. More information on the public computer labs can be found at www.iup.edu/itsupportcenter/labs.

Connectivity for student computers (wired) in the residence halls is provided through the Office of Housing, Residential Living, and Dining. 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, located in Cogswell Hall, and the regional campus libraries at Northpointe and Punxsutawney are the other components of the IUP Libraries system. Fourteen library faculty members, 18 staff members, and more than 150 students are employed in the Libraries division of the university.

The IUP Libraries serve the academic and research needs of students and faculty. Library collections and holdings include 529,360 print volumes, 277,194 electronic books, 274 print periodical subscriptions, and over 80,000 full-text electronic professional journals. The library subscribes to 359 full-text electronic databases and has a collection of 146,806 microforms. The Libraries' supplement its holdings via Interlibrary loans services.

The Orendorff Music Library, located in Cogswell Hall, contains approximately 12,000 books, 30,000 scores, 10,000 vinyl recordings, and 4,000 CDs. Undergraduate students may borrow non-reference music library materials.

The main campus library maintains a 24/5 schedule. For more information about the Library, please access our website at www.iup.edu/library.

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. 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
- Archaeological Services
- Center for Applied Psychology
- Center for Career and Technical Personnel Preparation
- Center for Creativity and Change
- Center for Digital Humanities and Culture
- Center for Family Business
- Center for Film Studies
- Center for Health Promotion and Cardiac Disease Prevention
- Center for Media Production and Research
- Center for Northern Appalachian Studies
- Center for Research in Criminology
- Center for Statistics Education in Pennsylvania
- Center for Teaching Excellence
- Child Study Center
- Criminal Justice Training Center
- Excellence in Entrepreneurial Leadership Center
- First Commonwealth Center for Economic Education
- Frederick Douglass Institute
- Government Contracting Assistance Program
- Institute for Cyber Security
- Institute for Mine Mapping, Archival Procedures, and Safety
- Institute for Rural Health and Safety
- Intercollegiate Athletic Institute for Sports Camps
- IUP Community Music School
- Literacy Center
- Management Services Group
- Mid-Atlantic Research and Training Institute for Community and Behavioral Health
- Pennsylvania/OSHA Consultation Program
- Small Business Development Center
- Small Business Incubator
- Small Business Institute
- Software Development Center
- Speech, Language, and Hearing Clinic
- The Wood Center at IUP

University Organization

The university's administration comprises five divisions: Academic Affairs, Administration and Finance, Enrollment Management and Communications, University Advancement, and Student Affairs. Information about Academic Affairs, Enrollment Management and Communications, and Student Affairs appears in this catalog's sections called 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 Advancement Division

The University Advancement division engages internal and external constituencies in support of the mission and vision of IUP. The division champions a culture of philanthropy that results in volunteerism, advocacy, and private gifts.

The University Advancement division accomplishes this mission through the following functional areas: Vice President, Alumni Relations, Development, Advancement Services, Regional Advancement, and Advancement Communications.

The division works closely with the Foundation for IUP and the Alumni Association, both private non-profit 501 (c) (3) affiliated organizations established to support IUP. These organizations are governed by volunteer boards of directors with a specific mission overseeing operations with fiduciary responsibility for programs and assets.

The Regional Campuses

Richard J. Muth, Director, Regional Campuses

Donna Purtell, Assistant Director, Northpointe Regional Campus

Colleen A. Casaday, Director of Academic and Administrative Services,
Punxsutawney Regional Campus

IUP operates two regional campuses, one in Punxsutawney, 28 miles north of the Indiana campus, and one at Northpointe in Freeport, 38 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.

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 Liberal Studies courses for all majors in the various undergraduate colleges of the university. Students referred by the Office of Admissions for first-year study at a regional campus may transition to the Indiana campus upon achieving 24 credits through two regular academic semesters and a 2.0 cumulative GPA.

The Punxsutawney Regional Campus hosts the IUP Academy of Culinary Arts. The Northpointe Regional Campus hosts the Respiratory Care program.

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

Admission

Any prospective student who wishes to attend his/her first year of study at either of the regional campuses may apply for admission by applying online through the IUP Admissions website, www.iup.edu/admissions.

Fees

With the exception of the wellness 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 or wellness 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 at 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 education opportunities. These greater opportunities for residents foster economic and professional growth for the region. Both credit and noncredit programs are offered at the Northpointe campus, with special emphasis on certificate and associate, bachelor's, and master's degrees. Required courses for the first year and, in some majors, the second year are also offered for local IUP students.

Prospective students who wish to attend the Northpointe Regional Campus may apply for admission through IUP's Admissions office.

Requests for additional information 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
Fax: 724-294-3310
E-mail: northpointe-campus@iup.edu
Website: www.iup.edu/northpointe

Punxsutawney Regional Campus

The focus of the Punxsutawney Regional Campus is to offer academic opportunities needed locally, regionally, and across the commonwealth. Students will be able to complete their first year of classes in most degree programs as well as complete a growing number of certificate and associate degree programs. Online and other technology-offered classes will increase opportunities and the option to increase the time enrolled in classes on the Punxsutawney Campus.

The Punxsutawney Regional Campus has a living center supporting a residential college experience. The campus has a full-service dining commons where meals are served seven days a week when the university is in session. The same food service contractors serving the Indiana campus operate the Punxsutawney dining program.

To request additional information about the Punxsutawney Regional Campus, please contact

IUP Punxsutawney Regional Campus
1012 Winslow Street
Punxsutawney, PA 15767
Telephone: 814-938-6711
E-mail: iup-pxy@iup.edu
Website: www.iup.edu/pxy

Admissions and Registration

Undergraduate Admissions Policy

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 July 1.

Requests for applications should be addressed to
Office of Admissions
Indiana University of Pennsylvania
Sutton Hall, Suite 120
1011 South Drive
Indiana, PA 15705
724-357-2230

An online application for admission is available at www.iup.edu/admissions/undergraduate/applynow.

The Admissions Committee, giving equal opportunity to all students, will take the following criteria into consideration when reviewing each application: grades and courses taken, SAT or ACT scores, high school counselor recommendations, 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.

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 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 requests 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

All people 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 online at 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.

Transfer Admissions

A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application, nonrefundable 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 requests for additional information, to other alternatives.

Transfer applications are reviewed on the basis of academic college course work attempted or completed. This course work should be nondevelopmental and nontechnical in nature and be taken from an institution that 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. Some majors require increased standards for admission and additional information. 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 application of the credits is at the discretion of the academic dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions that 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 better 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

Entering students are required to complete placement tests before 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 students' program of study. Students who have prepared as directed, taken testing seriously, and still believe their test scores do not accurately reflect their abilities should appeal their placement by contacting the Office of New Student Orientation.

IUP Residency Requirement for Awarding of Degrees

All students receiving their first baccalaureate degree are required to complete 30 of their last 60 credits in courses at IUP. All students receiving their first associate degree are required to complete 15 of their last 30 credits in courses at IUP.

For an IUP major, minor, or undergraduate certificate, students are required to complete at least 50 percent of required credits in courses at IUP or another State System institution. Junior/Senior year Study Abroad semesters or other formal Articulation agreements in which State System students may reverse-transfer credits back to IUP are exceptions to this policy.

For undergraduate active-duty service members, IUP applies a more military-friendly set of residency requirements, and these students should consult the Military and Veterans Resource Center for more information.

IUP courses include all courses listed in the *Undergraduate Catalog* and *Graduate Catalog*.

Office of Extended Studies

Website: www.iup.edu/extended

The Office of Extended Studies does the following:

- Engages the local and regional community to provide adult noncredit education, training, and skill development courses.
- Admits non-IUP students wishing to take a class into one or more of IUP's for-credit classes.
- Admits students into the 100% online associate or bachelor's degree programs at IUP.
- Manage internship, externship, and clinical experience agreements on behalf of Academic Affairs.
- Maintains authorization to offer online programs and field experiences in other states and assure compliance with related regulations.
- Provides qualified employers with reimbursement for training new and existing employees, through the Workforce and Economic Development Network of Pennsylvania program.

The office is located in the R&P Building, near the tennis courts. It can be reached by e-mail at ce-info@iup.edu or by phone at 724-357-2292.

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 30 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. Students may apply to the Admissions office for admission to a second baccalaureate degree.

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 PAPA 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 Communications section of this catalog or at the website www.iup.edu/education.

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

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 Communications. Please see detailed information in the Department of Developmental Studies description in the College of Education and Communications section of this catalog.

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 Admissions office to inquire about the Dual Enrollment Program.

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 who were not enrolled during the previous regular semester, must complete an Application for Readmission.

An application can be obtained by:

- Log into **MyIUP** and click on Academics. You will find **Apply for Readmission to IUP** in the "Academic Record" portlet which will allow you to apply online for readmission. If you don't have a MyIUP account, **claim your account** to get MyIUP access. (Note: If you last attended prior to fall 2000, complete a paper Application for Readmission that can be found at www.iup.edu/registrar/forms.)

The readmission deadline is one week prior to the start of the semester in which you are applying for readmission.

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.

Students in good academic standing who reapply to IUP and wish to be admitted into the Associate of Arts in General Studies program will be automatically admitted to that program. Students not in good academic standing who reapply to IUP and wish to be admitted into the Associate of Arts in General Studies program will be referred to the Office of the Dean of the College of Education and Communications for a decision.

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 Office of the Registrar 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. Because of enrollment restrictions, requests for readmission to Nursing or to 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 two 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 in the Undergraduate 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 application, and on prior academic record.

The Summer and Winter Sessions

The Summer and Winter Sessions at IUP are 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. The Winter Session schedule can be viewed at the website www.iup.edu/winter.

Attendance at Summer and Winter 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 or Winter courses. Non-IUP students (graduate and undergraduate) can submit an electronic form that can be accessed at the website www.iup.edu/summer or www.iup.edu/winter. Students who desire readmission should apply to the Office of the Registrar at least one week before the start of the semester for which a student is applying.

Finances

Institutional Fees*

*The university reserves the right to change its fees without notice. 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 Office of Admissions, by phoning 724-357-2230, or by visiting the website www.iup.edu/bursar.

Tuition

Tuition covers the keeping of student records, use of the library, student welfare, and laboratory facilities. The most current fee schedule for in-state and out-of-state students can be obtained by visiting the website www.iup.edu/bursar.

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

Current dining plans and rates can be found at: www.iup.edu/housing. Residential students are required to have a dining plan and can select from six plans. 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; Counseling Center; Alcohol, Tobacco, and Other Drugs; Fitness and Recreation; Health AWAREness; Haven Project; Nutrition Connection programs; Disability Services; and Athletics.

The Wellness Fee will be based upon the number of credits taken. Students will be charged \$15.50 per credit, with a cap of 15 credits. Students from other campuses may choose to pay this fee and receive care on the main campus.

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.

To request an exemption from this fee, students must complete the Activity and Wellness Fee Exemption Request form and e-mail it to bursars-office@iup.edu. Forms are also available for completion in the Office of the Bursar in Clark Hall.

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 \$374.80 for full-time resident students and \$30.20 per credit for part-time students. The fee is \$915.70 for full-time nonresident students and \$73.72 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 for the following term (fall or spring) occurs during the following time frame.

- \$100 will be assessed if the initial semester registration occurs after the last day of the current semester.
- \$200 will be assessed if the initial registration occurs on or after the first day of classes for the following semester.

Students must register for their fall courses before the end of the spring semester to avoid a late registration fee. The fee does not apply to adding or dropping classes to an existing schedule.

Summer is not considered a term since course work is optional during that time. 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. Resident students are required to have a dining plan and can select from six plans (see Dining Plan Fee).

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 covers the cost of student activities in recreation, athletics, lectures, entertainment, student organizations, student publications, etc. and is payable in one lump sum for the semester. The Student Activity Fee is assessed each semester on a per-credit basis as follows: \$28 per credit for all students, capped at 15 credits (\$420) for undergraduate students and 12 credits (\$336) for graduate students. This fee is assessed only to students attending the Indiana and Punxsutawney campuses.

To request an exemption from this fee, students must complete the Activity and Wellness Fee Exemption Request form and email it to bursars-office@iup.edu. Forms are also available for completion in the Office of the Bursar in Clark Hall.

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 \$15 per credit and graduate students, \$12 per credit.

Transportation Fee

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

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:

Pennsylvania residents: \$19 to a maximum of \$218
Nonresident students: \$28 to a maximum of \$332

Summer Sessions Fees

Basic Tuition Fee

The most current fee schedule can be obtained by writing to the IUP Office of Admissions, by phoning 724-357-2230, or by visiting the website www.iup.edu/bursar.

Summer Dining Plan Fees

Current summer dining fees can be found at 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 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 \$31.30 per credit for in-state students and \$76.30 per credit for out-of-state students.

Summer Registration Fee

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

Summer Residence Hall Fee

Current summer housing fees can be found at 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 is \$12.50 per credit up to a maximum of \$150 for undergraduate students.

Summer Student Services Fee

This fee in the summer is \$15 per credit for undergraduate students.

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:

In-state: \$19/credit *Out-of-state:* \$28/credit

Winter Session and Distance Education Only Fees

Basic Tuition Fee

The most current fee schedule can be obtained by writing to the IUP Office of Admissions, by phoning 724-357-2230, or by visiting the website www.iup.edu/bursar.

Winter Session and Distance Education Only 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 \$31.30 per credit for in-state students and \$76.30 per credit for out-of-state students.

Winter Session and Distance Education Only

Registration Fee

All students are charged a registration fee of \$32 for the winter session or distance education-only.

Winter Session and Distance Education Only Student Services Fee

This fee in the winter session or distance education-only is \$15 per credit for undergraduate students.

Winter Session and Distance Education Only Technology Tuition Fee

This fee is assessed to all students per winter session or distance education-only as follows:

In-state: \$19/credit *Out-of-state:* \$28/credit

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.

Application Fee

A nonrefundable \$25 application fee must accompany the application for admission to the university.

Advance Deposit Fee

An advance deposit—tuition fee of \$150 is required of all incoming freshmen to reserve a space in the freshman class and a dormitory room if applicable. All students desiring a residence hall room are also required to place an advance deposit housing fee of \$80 (fall semester only). These deposits are nonrefundable.

Audit Fee

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

Bad Check Charge

A fee of up to \$34 for handling charges will be assessed for each check or draft not honored by the bank upon which the check or draft was drawn for any reason, except in the event of a verifiable bank error.

Clinical Laboratory Registration Fee

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

Damage Fee

Students are responsible for damage, 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 \$37.50 per fall semester and \$51 per spring and summer semesters.

Examination for Credit Fee

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

I-Card Production Fee

A nonrefundable \$15 fee is charged to all incoming students for production of their I-Card. There is also a \$15 I-Card replacement fee for all replacement I-Cards.

Immigration Fee

All registered international students will be charged a nonrefundable immigration fee of \$75 per semester.

Installment Payment Fee

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

International Student Orientation Fee

This fee of \$125 is charged to all international students who register for the IUP orientation program to support associated costs.

International Student Placement Testing Fee

This fee of \$45 is charged to all international students who test.

Student Conduct Fines and Fees for Service

Based on student conduct sanctions, the following fees will be assessed:

BASICS-Alcohol/Marijuana	\$35
Alcohol/Chemical Health Assessment	\$45
Disciplinary Probation	\$100
Stayed Removal from residential building	\$150
Removal from halls	\$150
Ban from halls	\$150
Stayed Suspension	\$200
Suspension (must be paid to re-enroll)	\$300
Failure to Appear-administrative hearing	\$100
Failure to Appear-Conduct Board hearing	\$200

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.

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.

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.

Portfolio Application/Assessment Fee

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

Teacher Certification Fee

A fee of \$60 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.

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 \$130 for the one-day testing program and \$215 for the two-day program are charged. The placement retesting fee is \$30. Please see the catalog section on New Student Orientation for further information about the orientation programs for new freshman and transfer students.

Transcript Fees

Paper transcripts ordered online are free and are processed the next business day. Electronic transcripts ordered online cost \$10/copy and are processed the same business day. Paper transcripts can also be ordered on-line through MyIUP or by completing a paper request form and submitting it to the Office of the Registrar. These are free and are processed within three to five days. Paper requests can also be sent the same day for a \$10 fee. All details and complete instructions are found on the Office of the Registrar's website, www.iup.edu/registrar.

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.

Billing and Payments

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

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 Office of the Registrar 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 the student will not be honored, and official reports will be released by the Office of the Registrar only after the student has cleared his or her account or has established a payment plan satisfactory to the Office of the Bursar.

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 within 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 Department for Disability Access and Advising and to the Office of the Bursar to settle all unpaid accounts.

Payment of Financial Aid

Financial aid programs that can be deducted from a student's university bill include Federal Direct Loan, Federal Direct PLUS Loan, Federal Perkins Loan, Federal Pell Grant, Federal Supplemental Educational Opportunity 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.

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 semester) except for the Federal Pell Grant program and Federal Work Study program.
2. Be a US 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, postbaccalaureate second undergraduate degree program, or eligible certificate program.
5. Not be in default and 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. Resolve unusual enrollment history (if required).
8. Not have borrowed in excess of any federal loan limits.
9. Be registered with the Selective Service Administration, if required.
10. Have a valid Social Security number.

Students must submit a *Free Application for Federal Student Aid* (FAFSA) as soon as possible after October 1st 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 on 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 aid must be submitted by the student/parent for some aid programs.

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

1. Accurately complete and submit the appropriate applications/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 explained in more detail below.

Employment

The Student Employment Program is available to assist students in finding job opportunities on or off campus. Students may gain access to a listing of available positions by accessing the online job listing at www.iup.edu/studentemployment.

The Student Employment Program assists students in finding part-time employment. During the spring semester, a Spring Career 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). Representatives from local and out-of-state organizations attend the fair. Students may view a listing of seasonal job opportu-

nities by visiting the website 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 25 hours per week when classes are in session and up to 40 hours per week during breaks, including summer.* When classes are in session, most students work an average of 10 to 12 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 on 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.

An FWSP award may affect eligibility for student loans. For more specific information on how an FWSP award could impact loan eligibility, students should inquire at the Financial Aid counter in the lobby of Clark Hall or by e-mail at 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 and Professional 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 through the PHEAA website at www.pheaa.org and must be completed by both the student and the organization with which the student would like to be employed.

Important Disclaimer: The IUP Career and Professional Development Center serves only as a clearinghouse of information regarding job and internship opportunities. The listing of a position should not be interpreted as an endorsement. Students and alumni should personally research openings and agencies prior to entering into any contractual agreements. Accordingly, IUP expressly disclaims any liability in connection with potential or actual employment which results from any applicant's response to any job posted on the website.

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). Loans are awarded based on a combination of financial need and the receipt date of the annual FAFSA application. 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 semester). The minimum repayment rate is \$40 per month at a simple inter-

est rate of 5 percent per year on the unpaid balance. There are deferment and cancellation provisions available.

Federal Direct Subsidized and Unsubsidized Loan—The application for the Federal Direct Loan is the *Free Application for Federal Student Aid* (FAFSA). First-time borrowers will also need to complete a Federal Direct Electronic Loan Master Promissory Note (eMPN) and entrance counseling to finalize the approval process. Both the eMPN and entrance counseling can be completed at <https://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. Subsidized Federal Direct Loans are awarded on the basis of financial need as determined by the FAFSA and require no payment of principal or interest until six months after the student ceases half-time enrollment (6 credits per semester). Unsubsidized Federal Direct 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 Loans are repayable to the US Department of Education, which can also provide current interest rate information.

Additional Unsubsidized Federal Direct Loan funds are available to independent undergraduate students. Freshmen and sophomores may receive up to \$4,000; juniors and seniors may receive up to \$5,000. Dependent students whose parents cannot obtain a Federal Direct PLUS Loan may also be eligible for these additional unsubsidized funds. As of July 1, 2013, a first-time Federal Direct Student Loan borrower is no longer eligible for the subsidized direct loan if he or she exceeds 150 percent of the program's published length. In addition, a borrower exceeding the 150 percent of the program length will lose the interest subsidy on his or her subsidized direct loans.

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 <https://www.studentloans.gov>. Parents may borrow for their dependent children up to the cost of education minus other financial aid. The loans are repaid starting 60 days after the final disbursement for the loan period is issued, however, in-school deferment provisions are available. The US 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 ElmSelect web page at www.elmselect.com for a list of those alternative loans borrowed by IUP students in the last five years, if the lender is still participating.

Grants

Grants are funds that 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 or who have not used their lifetime limit. A *Free Application for Federal Student Aid* (FAFSA) must be filed annually to apply for this grant. Awards are based on the number of credits for which a student is enrolled on the 15th day of the term for the Fall and Spring. Students may be eligible for a Pell Grant for fall/spring and summer. A maximum of 12 full-time semesters (or its equivalent) of eligibility is permitted.

Federal Supplemental Educational Opportunity Grant (FSEOG)—Federal Pell Grant-eligible students are considered for FSEOG. Grants are awarded based on a combination of financial need and the receipt date of the annual FAFSA application. 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. You must complete a *Free Application for Federal Student Aid* (FAFSA) by May 1 to be considered. 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 8 full-time or 16 part-time semesters of eligibility is permitted. Students can take no more than 50 percent of their credits per semester online to be eligible for PHEAA Grant funds. During summer sessions, students must be enrolled for a minimum of five weeks. Students choosing to take more than 50 percent of their credits online may qualify for funding through the State Grant Distance Education Pilot Program.

State Grants—Some 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

IUP Scholarships—Departments, colleges, and the University Scholarship Committee 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. In addition to the admission application, a general scholarship application is available at <https://iup.scholarships.ngwebsolutions.com>. Eligible students are automatically considered for scholarship opportunities. See the website www.iup.edu/scholarships for further information, including contacts for each scholarship. General questions may be directed to the scholarship coordinator in the Financial Aid office, 200 Clark Hall, 1090 South Drive, Indiana, PA 15705; telephone: 724-357-2218; e-mail: financial-aid@iup.edu.

PASSHE Foundation Scholarships—Students who attend a Pennsylvania State System of Higher Education University (PASSHE) can apply for scholarships from the PASSHE Foundation. These scholarships have been established to assist both undergraduate- and graduate-level students. For more information and applications, students should visit www.thepafoundation.org.

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.

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 students to conduct searches on their own and to apply for these scholarships online. For complete information, students can visit www.iup.edu/scholarships.

ROTC Scholarships—The Reserve Officers' Training Corps (ROTC) offers many different types of scholarships. High school students can apply for the ROTC four-year or three-year Advanced Designee scholarships before attending college. College students can apply for a 3.5-year, 3-year, 2.5-year, or 2-year scholarship. ROTC scholarships pay for tuition and fees, a book allowance, and a monthly stipend (while school is in session). Scholarships are competitive and depend on the students' academic major. Interested and eligible high school students may apply online at www.goarmy.com/rotc. College students may obtain additional information and eligibility criteria by contacting the ROTC staff members in Pierce Hall at IUP or by calling 800-IUP-ROTC.

Other Resources

Athletic Grants-in-Aid—IUP is an NCAA Division II institution. Athletic Grants-in-Aid awards are available in accordance with NCAA rules and regulations at the discretion of the respective head coach. Please see www.iupathletics.com for more information regarding sports that are offered.

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, Residential Living, and Dining website. Community assistants are selected on the basis of leadership, interpersonal skills, and willingness and ability to serve as role models. Community assistants must have and maintain a 2.5 GPA. For further information, please contact the Office of Housing, Residential Living, and Dining, G37 Ruddock Hall, 1099 Maple Street, 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. To be eligible, students must satisfy the physical and financial requirements of the agency. For further information, students should contact their county offices of vocational rehabilitation.

Pennsylvania National Guard Educational Assistance Program (EAP)—Together with the Pennsylvania Department of Military and Veterans Affairs, PHEAA administers this tuition assistance program for students who enter into a service commitment with the Pennsylvania National Guard for a period of six years. Eligible students who join the Pennsylvania Army/Air National Guard may be eligible for a state EAP grant up to the amount of the PASSHE full-time tuition rate. This award may be reduced for students who also are receiving Federal Tuition Assistance benefits and/or benefits from Chapter 33 of the GI Bill. Currently eligible students may receive ten semesters of EAP. To apply for EPA and/or receive the most current information regarding this benefit, the military member should contact the readiness noncommissioned officer at his/her unit. Additional information may also be obtained by calling 717-861-8626 or 800-GO-GUARD.

University Refund Advance

The Financial Aid office, in conjunction with the Student Cooperative Association, administers the University Refund Advance on behalf of IUP students. Funds are available only to students who are expecting a financial aid refund that is yet to be disbursed. The maximum award is \$500, with repayment to be made in 60 days. No interest will be charged for these advances. Awards will be made to meet educational expenses only. See the Financial Aid office for the University Refund Advance application and additional information.

The University Refund Advance 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

Military and Veterans Resource Center

E-Mail: iup-mrc@iup.edu; **Telephone:** 724-357-3008

The Veterans Affairs Benefits (VAB) Office certifies enrollment for undergraduate and graduate students who are eligible for veterans' education benefits. Veterans, reservists, spouses, and children of deceased or disabled veterans should contact the VAB before enrollment. Veteran dependents and reservists must submit the following:

1. Certificate of Eligibility
2. Certification Request Form

Twelve credits are required to be considered a full-time undergraduate by the Veterans Administration. The minimum full-time requirement for a graduate student is nine credits. In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for VA education benefits. Benefit programs may be reviewed at www.gibill.va.gov.

Out-of-state students may qualify for in-state tuition rates if they meet the criteria defined in the Choice Act of 2014. If you have questions about your eligibility, contact the Military Resource Center (MRC).

The MRC/VAB serves as a one-stop information and referral site to help students transition to college life and achieve their academic goals by providing military-friendly programs and services to IUP's veteran and military-affiliated students. The MRC is designed to serve student veterans by helping them to find the guidance and information they need to complete their educational goals and by enhancing the sense of community they share with other students in similar circumstances.

For further information, veterans should contact the Director, MRC/VAB, 101 Pratt Hall, Indiana, PA 15705, 724-357-3008. Email may be sent to veterans-affairs@iup.edu. Veterans may also review the IUP veterans website at www.iup.edu/veterans.

Title IV Satisfactory Academic Progress Policy

"In order to receive Student Financial Aid under the programs authorized by Title IV of the Higher Education Act, as amended, a student must be maintaining satisfactory academic progress in the course of study that he/she is pursuing." (Federal Register/Volume 48, No. 195/Thursday, October 6, 1983.) Students must be in compliance with both the university's Academic Standards Policy and the Financial Aid Sufficient Progress Policy (SAP) to demonstrate satisfactory progress.

These Title IV programs include Federal Pell Grant, Federal Work Study Program, Federal Supplemental Educational Opportunity Grant (FSEOG), Federal Perkins Loan, Federal Direct Loans, and Federal Parent PLUS Loan.

A student who is meets the university's Academic Standards Policy, but who does not meet the Financial Aid SAP qualitative and quantitative standards, may continue in university registration, but will not be eligible to participate in the Federal Title IV aid programs. This happens because the Financial Aid SAP Policy is stricter than the university's Academic Standards Policy

A full statement of requirements for Satisfactory Academic Progress for Title IV Federal Student Aid is available at the Financial Aid office and on the website.

Title IV Financial Aid Satisfactory Academic Progress Policy

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

A. Financial Aid Satisfactory Academic Progress (SAP): To be considered in good financial aid SAP standing, undergraduate students must maintain a 2.0 CGPA, must successfully complete (pass) at least 67 percent of the cumulative number of their registered credits at IUP, and must complete their degree requirements within an established time frame of no longer than 150 percent of the published length of the program.

Students' SAP is measured for each academic year at the end of the spring semester (corresponding with the end of the spring payment period), after

grade processing has been completed. This measurement determines if students have met the required CGPA, have passed a sufficient percentage of credits, and time frame completion in order to be eligible for Title IV funding in future terms.

Students are notified of their financial aid suspension status via email and USPS direct mail when a completed Free Application for Federal Student Aid (FAFSA) for the upcoming academic year is on file in the Financial Aid office. Students are also able to review their SAP status on their MyIUP account.

B. Financial Aid Suspension: When students who do not meet CGPA and have not successfully passed the sufficient number of credits, all Title IV aid for that student will be suspended beginning with the next semester of attendance.

A student who is in this financial aid suspension status, however, will be reviewed at the end of the next semester of attendance to evaluate if the percent of progress and CGPA are met. If the percent of progress and CGPA are achieved, then the student's Title IV financial aid suspension will be rescinded beginning with the next semester of enrollment.

C. Time Frame for Degree Completion: In addition to meeting the 67 percent of progress and CGPA requirements, students must complete their degree requirements within an established time frame of no longer than 150 percent of the published length of the program. Since enrollment status may vary from term to term, the maximum period for degree completion is measured in terms of credits attempted at IUP plus any transfer credits. Part-time and full-time students are treated equally under this policy. For example, undergraduates should complete the requirements for a bachelor's degree at the point of having 180 registered credits at IUP (150 percent of the published length of the program).

D. Appeal Process: Students who have special circumstances, beyond their control (such as medical emergencies or death of a family member), which cause them to not make SAP, may submit a written appeal to the Financial Aid Appeals Committee for consideration of reinstatement of Title IV aid eligibility. However, a special circumstance does not guarantee an exception to the financial aid SAP regulations. Students who exceed the 150 percent credit guidelines due to change of major or double majors may also submit a written appeal.

The written appeal must specifically outline the reason(s) for the progress deficiency *and* identify what has changed to allow the student to make SAP by the next evaluation. The appeal must contain sufficient documentation to substantiate the reason cited for lack of progress for instance, supporting documentation from a healthcare provider that clarifies the student's health situation, an obituary, and/or letters of support from relevant professional individuals (not related to the student) are all acceptable forms of documentation. Letters from third party individuals must be on letterhead and contain a hand-written signature. Electronic signatures are not accepted

For students who do not appeal or who are denied an appeal for a semester, an appeal for reinstatement of Title IV aid for a subsequent semester 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: In order for students to reestablish eligibility to receive Title IV financial aid, one of the following must occur:

1. Students must meet the minimum requirements for SAP (at least 67 percent cumulative percent of progress, meet the CGPA requirement (2.0 UG or 3.0 GR), and the time frame for degree completion).

OR

2. The Financial Aid Appeals Committee must approve the student's written appeal (based on documented circumstances).

F. Treatment of Transfer Credits, Audits, Incompletes, and Other Grades:

1. **Transfer Credits:** All transfer credits that students transfer into IUP are taken into consideration as part of their attempted and passed credits for purposes of measuring SAP percent of progress as well as time frame for degree completion.
2. **Audits, "S," and "U" Grades:** Because course audits, "S," and "U" grades carry no credits, they are not reviewed or counted for SAP progress purposes.
3. **Incompletes:** Designations of "I," "L," "R," and "*" are treated as credits attempted/zero credits passed, thus have no effect on CGPA. However, these designations are treated as non-completed (attempted) credits and have an impact in the calculation of the percent of progress measure and time frame for degree completion. (Note: The "*" is an administrative symbol indicating that a grade was not submitted at the time of grade processing.)
4. **"F" Repeat with Replacement:** An "F" repeat with replacement is treated as credits attempted/credits passed/with the quality points (QP) of the new grade replacing the 0.00 QP of the original "F" grade. An "F" repeat has a positive effect on the CGPA, but represents an additional number of credits attempted in regard to the percent of progress and time frame for degree completion measurements.
5. **"D" Repeat with Replacement:** Repeated classes that are "D" replacements to a student's record are treated as credits attempted/zero credits passed/with the quality points (QP) of the new grade replacing the 1.00 QP of the "D" grade. A "D" repeat with replacement may improve a student's CGPA, but represents an additional number of credits attempted in regard to the percent of progress and time frame for degree completion measurements.
6. **Repeats with Averaging:** Courses that are repeated with averaging count as credits attempted/credits passed with the quality points for the class averaged into the CGPA. The maximum time frame for degree completion may be impacted by repeat with averaging classes.
7. **Withdrawals:** Designations of "N," "W," "Q," "WP," or "WF" are treated as registered credits/zero credits passed/no effect on CGPA. Any type of "W" designation is treated as noncompleted (attempted) credits in the calculation of percent of progress and time frame for degree completion measurements.
8. **Pass/Fail Grades:** Pass grades are treated as registered credits/credits passed/no effect on GPA. Fail grades are treated as registered credits/zero credits passed/with zero QP averaged into the calculation of GPA.
9. **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 toward degree requirements and no financial aid may be received for enrollment.
10. **Institutional Credits:** Institutional credits are counted as registered credits/credits completed. The QP for the course is not averaged into the student's overall GPA.
11. **Fresh Start Program/Canceled Semester:** Students readmitted under the Fresh Start Program, or who have had a canceled semester, must still meet the financial aid qualitative and quantitative SAP requirements (using all previously enrolled semester data). Federal regulations do not permit the financial aid office staff to remove or ignore any academic statistics.

Unofficial Withdrawal

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 they actually completed the semester. Faculty members will be required to provide information to the Financial Aid office regarding the students' 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.

Student Affairs Division Areas

Website: www.iup.edu/studentaffairs; **E-mail:** iup-hawks@iup.edu

Through collaboration focused on student learning and success, IUP's Student Affairs Division offers student-centered services, programs, and experiences which promote excellence, stimulate discovery, celebrate diversity, and motivate students' development, involvement, and personal and professional achievement.

Vice President for Student Affairs: Rhonda H. Luckey
Associate Vice President for Student Affairs for Living-Learning and Well-Being: Michael W. Lemasters
Associate Vice President for Student Affairs for University and Community Engagement: Kathleen R. Linder
Department for Disability Access and Advising/Disability Support/General Advising: Catherine M. Dugan
Alcohol, Tobacco, Other Drugs: Ann E. Sesti
Assessment: John G. Makara
Club Sports: Emily A. Briggs
Communications: Caitlin Aiello
Communications and Program Coordination: Brianna N. Drylie
Counseling Center: Jessica E. Miller
Dining Services: Valerie Baroni
Greek Life and Student Engagement: Elizabeth E. Sarneso
Haven Project: Jessica E. Miller
Health and Wellness Promotion: Sara C. Dillon
Health Service: Melissa L. Dick
Housing Auxiliary Services: Valerie Baroni
Intercollegiate Athletics: Stephen P. Roach
Intramurals: Michael J. Carnovale
Military and Veterans Resource Center: Cory Shay
Multicultural Affairs and Student Success: Leslie L. Coates
Multicultural Student Leadership and Engagement: Theodore G. Turner
Residential Living: Sondra R. Dennison
Sexual Violence Prevention: Susan Graham
Student Conduct: Theodore M. Cogar, Adam M. Jones
Student Cooperative Association: Louis F. Garzarelli
Student Leadership and New Student Success: Kevin Foster
Technology: Patrick J. McDevitt

Alcohol, Tobacco, and Other Drugs

Website: www.iup.edu/atod; **Telephone:** 724-357-1265

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.

Athletics

Website: www.iupathletics.com

Varsity Sports: The university offers 19 varsity sports for men and women. It competes at the NCAA Division II level in the Pennsylvania State Athletic Conference.

Fall sports include men's golf, men's and women's cross country, field hockey, football, women's soccer, women's tennis, and women's volleyball. Winter sports include men's and women's basketball, men's and women's swimming, and men's and women's indoor track. Spring sports include baseball, men's golf, women's lacrosse, softball, women's tennis, and men's and women's track and field.

Club Sports: Club Sports offers students a unique opportunity to engage in a pleasurable, competitive athletic endeavor by taking part in the leadership, responsibility, and decision-making process of club activities. The Athletic Department provides the professional guidance, facility support, and administrative framework under which the clubs function. Each club is a recognized organization.

The Counseling Center

Website: www.iup.edu/counselingcenter; **Telephone:** 724-357-2621
Website: www.iup.edu/haven, **Prevention/Education:** 724-357-3947

The Counseling Center facilitates personal and emotional growth of students by offering confidential short-term counseling and consultation on individual and small-group bases. It operates the Haven Project (see below) addressing sexual violence education, prevention, and intervention.

The center also provides educational programs and workshops on a variety of topics, including stress management, eating disorders, grief, and healthy relationships.

The center serves as a resource to the university for mental health and psycho-educational concerns. Individual consultation to faculty, staff, families, and friends of students who may have concerns about a student is an integral part of the Counseling Center's mission. Through its five-star chapter of ActiveMinds, a nationwide student organization focused on mental health, the center offers all IUP students an opportunity for community service and advocacy.

In addition to helping students deal with adjustment, anxiety, stress, depression, and other common concerns, the Counseling Center provides specialty counseling in two identified areas. The center provides short-term treatment and assessment for students dealing with substance use and abuse as well as counseling and support for students who have experienced personal violence (the Haven Project). Walk-in hours are available.

Haven Project: The Haven Project provides counseling services for students who experience violence, prevention education about stalking, domestic/dating violence, and sexual assault. It is a service within the Counseling Center.

Counseling Center services are provided by faculty members who are licensed psychologists and by clinical associates/clinical trainees who are advanced doctoral students in clinical psychology. Advanced doctoral students work under the supervision of the licensed psychologists.

Services at the center are paid for through the Wellness Fee. For more information, contact the center at the telephone number or website listed above and view the video, or visit the Suites on Maple East, G31.

Department for Disability Access and Advising

Website: www.iup.edu/disabilitysupport
E-mail: disability-access@iup.edu

The Department for Disability Access and Advising has as its primary function advising students with disabilities (See Disability Access and Advising).

Disability Access and Advising

(within Department for Disability Access and Advising)

Disability Access and Advising 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; alternate text;

NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 216 Pratt Hall, by calling 724-357-4067 (V/TD), or www.iup.edu/disabilitysupport.

Health and Well-Being (Center for)

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

IUP's Center for Health and Well-Being provides wellness-related student services. The Health Service and Counseling Center; the Haven Project; Health AWAREness; Nutrition Connection; and the Alcohol, Tobacco, and Other Drugs program are located in the center in the Suites on Maple East. Most services within the center are funded by the Indiana campus students' wellness fees. Some services may have an additional fee.

Health AWAREness

Website: www.iup.edu/healthawareness; **Telephone:** 724-357-4799
E-Mail: health-awareness@iup.edu

Health AWAREness provides educational programs and services that encourage students to make healthy lifestyle choices. Common issues addressed through this programs include sexual health, HIV/AIDS, and body image. Health AWAREness provides presentations in classrooms, residence halls, and student organization meetings. Students who need assistance in accessing health and human services can receive help by contacting Health AWAREness at the telephone number or website listed above.

Health Service

Website: www.iup.edu/healthservice; **Telephone:** 724-357-2550
E-Mail: health-inquiry@iup.edu

Health Service provides routine health care to students on days that classes are in session. Health Service is staffed by physicians, nurse practitioners, nurses, and clerical staff. It operates on an appointment system with walk-in service available. For emergency care, the local hospital emergency room is available 24/7. (Hospital services are not covered by the Wellness Fee.)

Health Service provides some minor surgical procedures, some laboratory testing, allergy/medication, injections, suturing, IV hydration, physicals, wound care, gynecological exams, contraceptive consults, as well as basic illness and injury care. Health Service has a self-care cold and wound center that provides over-the-counter medication and wound supplies for students. Flu shots, Tb test clinics, and Meningitis vaccines are offered at no cost to students. The Health Service van provides transportation to pharmacies and local medical facilities for scheduled appointments during regular office hours.

IUP requires documentation of the following vaccines: measles, mumps, rubella (MMR), tetanus-toxoid, diphtheria and pertussis (Tdap), polio, and meningitis. Recommended vaccines include varicella, Gardasil, Hepatitis A, and Hepatitis B. Tetanus-toxoid diphtheria should be updated every ten years. 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.

The 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. It is highly recommended that students who do not have an insurance plan consider purchasing coverage before arriving at IUP. Please visit the website www.healthcare.gov for more information on insurance coverage.

Nutrition Connection

Website: www.iup.edu/foodnutrition/nutritionconnection
Telephone: 724-357-4797

Nutrition Connection services are sponsored by the Department of Food and Nutrition with support from the Center for Health and Well-Being in the Suites on Maple East and the 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 course work in wellness and clinical nutrition and who are currently enrolled in FDNT 463 Nutrition Counseling. A registered dietitian and IUP faculty member 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.

Housing, Residential Living, and Dining Information

Website: www.iup.edu/housing;
E-mail: iup-housing@iup.edu or iup-dining@iup.edu

Residential Living: IUP is a residential campus. On-campus housing is 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 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, Residential Living, and Dining 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. Students should consider these options carefully and select the one with which they would feel most comfortable.

Residency Requirement: A two-semester residency requirement was implemented beginning in fall 2006 to support student academic success, enhance student development, and assist students in making a smooth transition to university life. Residency requirement: All full-time, first-time freshmen attending the Indiana campus are required to reside on campus for two semesters. Students transferring from an IUP regional campus and attending the Indiana campus for the first time are required to live on campus for at least two semesters. After at least one semester and attainment of 60 or more credits, regional campus transfer students will have fulfilled the Indiana campus residency requirement. Students transferring to the IUP Indiana campus from other colleges or universities and international students with fewer than 60 credits are required to live on campus until they attain 60 credits. Exceptions to this requirement include students who (a) commute no more than 35 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, Residential Living, and Dining, 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.

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. For more information, contact iup-dining@iup.edu or go online to 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.

Military and Veterans Resource Center

Website: www.iup.edu/veterans/resource-center

E-Mail: iup-mrc@iup.edu; **Telephone:** 724-357-3008

The Military Resource Center (MRC) and Veterans Affairs Benefits Office (VAB) serves as a one-stop information and referral site to help students transition to college life and achieve their academic goals by providing military-friendly programs and services to IUP's veteran and military-affiliated students. The MRC is designed to serve student veterans by helping them to find the guidance and information they need to complete their educational goals and by enhancing the sense of community they share with other students in similar circumstances.

The VAB Office certifies enrollment for undergraduate and graduate students who are eligible for veterans' education benefits. Veterans, reservists, spouses, and children of deceased or disabled veterans should contact the VAB before enrollment. Veteran dependents and reservists must submit the following: (1) Certificate of Eligibility, and (2) Certification Request Form.

Twelve credits are required to be considered a full-time undergraduate by the Veterans Administration. The minimum full-time requirement for a graduate student is nine credits. In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for VA education benefits. Benefit programs may be reviewed at www.gibill.va.gov.

Out-of-state students may qualify for in-state tuition rates if they meet the criteria defined in the Choice Act of 2014. If you have questions about your eligibility, contact the MRC.

For further information, veterans should contact the Director, MRC/VAB, 101 Pratt Hall, Indiana, PA 15705, 724-357-3008. Email may be sent to veterans-affairs@iup.edu. Veterans may also review the IUP veterans website at www.iup.edu/veterans.

Student Conduct (Office of)

Website: www.iup.edu/studentconduct

The Office of Student Conduct 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 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 students' alleged policy violations 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 at the website listed above.

Student Cooperative Association

Website: www.iup.edu/coop

The Student Co-op has played an extremely valuable and significant role in the co-curricular life of the university since its founding in 1933. All students, faculty and staff members, and IUP alumni who pay the student activity fee are members of the association. Virtually all campus-wide activities, outside the instructional program, are sponsored entirely or in-part by the Student Co-op. The student's I-Card will admit him or her, free of charge, or at a reduced fee, to university social, cultural, and athletic events, as well as each IndiGO bus routes.

The Student Co-op operates the Hadley Union Building (HUB) complex on behalf of the university community. Inside the HUB complex, you will find the Co-op Store (IUP's official campus bookstore), the HUB Fitness Center and Gymnasium, the HUB Computer Lounge, the HUB Rock Café II food court, Fast Times Screen-printing, and PNC Bank. In addition, students and visitors alike can visit the HUB Information Desk to learn more about the IUP campus, or stop by the HUB Box Office to purchase tickets to university-sponsored events, including those from the College of Fine Arts and official university break buses.

The Co-op Store: The Co-op Store is a not-for-profit entity that provides financial support to the Student Cooperative Association. Textbooks for IUP courses are available in many different options including, new & used textbooks, rental book options, course packets, loose-leaf textbooks, e-Books and passcodes. The store has partnered with the university to provide students with their own individual booklist through their MyIUP page. The store has invested in comparison software to help provide students with low-cost options for course materials from a number of additional vendor partners. The Co-op Store has continued their partnership with the university in providing a Financial Aid module to allow for students to purchase their course requirements to coincide with the beginning of each semester. The Supply and Art Departments provide additional value in partnering with the faculty for required course materials, as well as, everyday classroom needs. Indiana University of Pennsylvania memorabilia and Crimson Hawk gear is available throughout the year at the store and online to help support the collegiate spirit. Other categories available at The Co-op Store include: stationery, sundries, electronics, computers, luggage, a copy center, dorm supplies and health and beauty. Please feel free to visit us online at www.iupstore.com or call us at 1-800-537-7916 with any questions

The Co-op Recreational Park: The Co-op Recreational Park is comprised of 270 beautiful acres in White Township. Included are a lodge building that will accommodate groups of up to 200 people, a ski hut, a nationally-ranked disc golf course, a 5K par course, hiking and biking trails, a picnic shelter, an archery range, two softball fields, and a catch-and-release fishing pond.

Campus Recreation: Additionally, the Student Co-op is the home of the university's Campus Recreation program, with its state-of-the-art Fitness Center, featuring both cardiovascular and strength-training equipment, and Gymnasium, featuring three full-sized multi-use courts and an elevated running track. The Campus Recreation program also provides open recreation, intramural sports, and Les Mills group fitness classes.

STATIC: The Student Co-op also sponsors the Student Activity Committee (STATIC), which is IUP's official student-led, student-centered campus programming organization. STATIC brings the very best entertainment to campus, including concerts, comedians, speakers, films, trips, novelty and cultural events, and much more. Any student can get involved with STATIC by visiting static.coop.iup.edu, STATIC's social media pages static.coop.iup.edu, STATIC's social media pages (@STATICatIUP), or its office in the HUB, room 215-216.

The Penn: 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 and public relations, business, advertising and marketing, and graphic design. Students are encouraged to join the staff of the *Penn*, regardless of their chosen majors.

Multicultural Student Leadership and Engagement (Center for) (MCSLE)

Website: www.iup.edu/mcsle

MCSLE provides inclusive student services and programs that maximize potential collaboration between diverse student populations and recognized student organizations. The center coordinates and supports programming that is wide-ranging and capitalizes on shared resources for the benefit of serving all students. MCSLE encourages mindful collaboration with an emphasis on the importance of inclusion in multicultural programs, allowing for more purposeful planning of events through a unified calendar.

MCSLE provides opportunities for students to develop skills that enhance lifelong problem-solving, relationship-building, communication, and decision-making abilities in our complex, diverse society. Staff members encourage students to forge positive relationships with their peers, develop and enhance an appreciation for diversity, and to participate in values-based recognized student organizations, university traditions, and fraternal experiences. The center is located at 307 Pratt Hall.

Multicultural Affairs & Student Success (MASS): The MASS office supports the mission of IUP and the Center for Multicultural Student Leadership and Engagement by empowering students, individually and collectively, to participate in intentional and interconnected learning, leadership, engagement, and multicultural experiences through events, services, and programming. The MASS office encourages students to forge positive relationships within the University, and with peers to enhance their appreciation for diversity and culture.

The MASS office also promotes the development of a university community characterized by student involvement, unity, inclusion, and multicultural competence, while respecting and supporting the needs and desires of members of affinity groups to gather and celebrate distinctive cultural backgrounds, traditions, and experiences in safe places. The MASS office is located at B23 Delaney Hall.

Student Leadership: Student Leadership supports the mission of IUP by providing leadership development opportunities for students and recognized student organizations and by supporting co-curricular activities and student engagement. Student Leadership also creates an environment that promotes the positive growth and development of students and facilitates a productive learning experience.

Student Engagement: Through individual leadership and recognized student organization volunteer, service, and philanthropic experiences, students have the opportunity to contribute positively to the University and Indiana communities. These engagement experiences provide meaning and value, promote resilience and understanding beyond self, and create a sense of belonging or "home."

Greek Life: IUP recognizes 32 fraternities and sororities, including ten culturally-based Greek letter organizations. Within Greek Life, the center challenges students to forge positive relationships with their peers, the campus community, and the Borough of Indiana, while advancing their commitment to their values-based organizations and the fraternal experience.

Recognized Student Organizations: There are currently more than 270 recognized student organizations, including Greek life, advised by faculty or staff members selected by the students. Students are encouraged to initiate and support new groups that reflect interests not currently represented by existing organizations.

Under the direction of MCSLE, and funded in part 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.

Students can go to CrimsonConnect to learn about different recognized student organizations, campus programs, events, and other opportunities to get involved at IUP. CrimsonConnect helps recognized student organizations and university programs promote their organizations, events, and involvement.

Six O'Clock Series: The Six O'Clock Series is a series of lectures and presentations held on most Monday evenings at 6:00 pm during the academic year that are designed to address current issues and approach topics from varying perspectives. The series strives to encourage critical thinking and understanding of multiple perspectives. Approximately 3,500 students participate in the series each year.

Student Government Association (SGA): The SGA is the representative and recognized voice of IUP's student body. The SGA is led by a president and an executive board elected at large in a general election by undergraduate students. 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 SGA senator is a representative on the University Senate, the institution's chief governing body. The SGA meets weekly. 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 through CrimsonConnect at <https://iup.collegiatelink.net/organization/studentgovernmentassociation>.

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

Enrollment Management and Communications Division

Website: www.iup.edu/enrollment

Patricia C. McCarthy, Interim Vice President for Enrollment Management and Communications

Graduate Admissions: Paula L. Stossel, Assistant Vice President for Enrollment Management and Processing

Undergraduate Admissions: Stacy L. Hopkins, Executive Director

Culinary Admissions: Enid E. Resenic, Director, Administrative Services

Career and Professional Development Center: Tammy P. Manko, Director

Communications and Marketing: Michelle Shaffer Fryling, Executive Director, Communications and Media Relations

Michael J. Powers, Director of Electronic Communications

Financial Aid: Ragan Griffin, Director

Admissions

Website: www.iup.edu/admissions; **E-mail:** admissions-inquiry@iup.edu

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

Financial Aid

Website: www.iup.edu/financialaid; **E-mail:** financial-aid@iup.edu

See the Financial Aid section of this catalog for information.

Career and Professional Development Center

Website: www.iup.edu/career; **E-mail:** career-development@iup.edu

Career services are available to students and alumni. In addition to career education, the primary functions of the office are to arrange for campus interviews, build and maintain a current online database of job and internship opportunities, maintain extensive online resources with employment information, conduct follow-up studies of graduates, and provide general assistance in the career-planning and job-seeking processes. The center provides multiple opportunities for networking and career fair participation, while maintaining an active social media presence with students, alumni, employers, and other stakeholders.

The center also receives and makes available to graduate and undergraduate students information concerning summer employment and internships. The

university does not guarantee positions, but IUP's record of productivity for students and graduates is competitive with that of other universities.

Service Learning offers IUP students curriculum-based, wage-supported, and volunteer opportunities to explore, expand, and fulfill their altruistic interests. The office works closely with nearly 60 Indiana County human service, federal, state, and local government agencies and the Indiana Area School District to place students in volunteer host sites. Visit the office website at www.iup.edu/servicelearning.

Internships/Cooperative Learning: Many departments of the university have developed internship/cooperative education programs that 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 and co-ops, consult the internship liaison in the Career and Professional Development Center, 302 Pratt Hall, the student's department internship/co-op coordinator, or the website www.iup.edu/internships.

Communications and Marketing Office

Website: www.iup.edu/communications

IUP's Communications and Marketing office consults with members of the campus community to assist them in meeting their communications needs. The staff uses its expertise in various communications specialties to assist with delivering messages to audiences using best practices and strategies.

The following services and policies do not fall under the divisions of Student Affairs or Enrollment Management and Communications

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 in the Department of Developmental Studies section of this catalog.

IT Support Center

Website: www.iup.edu/itsupportcenter; **E-mail:** 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 ihelp at <https://ihelp.iup.edu> or, for emergency issues, via phone (724-357-4000). The website (above) includes several sections that 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; **E-mail:** 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 MyIUP website. Parking regulations and maps can be viewed online at 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).

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 45 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 of the decision by a university official 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 that 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; or 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 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 US 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, US Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-4605.

Student Rights/Directory Information

The following information is considered directory information under the Family Educational Rights and Privacy Act 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 nondisclosure request, available in the Office of the Registrar, Clark Hall. This will result in the student's directory information being removed from the "Find People" on-line directory on the IUP website. Upon receipt of this signed form in the Office of the Registrar, all information will be withheld, even beyond graduation, unless the student requests in writing that this nondisclosure request be rescinded.

Non-Discrimination and Harassment Policy

Discrimination based on age, color, national origin, race, religion, disability, veteran's status, sex, sexual orientation, or gender identity is prohibited. All employees, students, and those outside of the university who work in or with the university, including vendors and volunteers, must comply with applicable federal, state, and local laws as well as government regulations regarding discrimination.

Acts of discrimination, harassment or retaliation will not be tolerated, and alleged violations of this policy will be investigated following the steps detailed in the policy. Violators of this policy will be disciplined consistent with this policy and applicable labor agreements. Discipline may include but is not limited to a warning, transfer, suspension, termination, or expulsion from the university.

Complaints of sexual harassment or sexual violence, including sexual assault, dating violence, domestic violence, and stalking are processed under the university's Sexual Harassment and Sexual Violence policy and related procedures. For more information about the university's Title IX program, please refer to the University's Social Equity website at: www.iup.edu/social-equity/policies/title-ix/default.aspx.

Definitions

Discrimination: An adverse employment or academic action or decision that is based on or motivated by an individual's membership in a protected class that is sufficiently severe, persistent, or pervasive so as to substantially limit or interfere with an individual's work environment, educational performance, participation in extracurricular activities or equal access to the university's resources and opportunities.

Harassment: Any conduct directed toward an individual based on membership in a protected class that is sufficiently severe, persistent, or pervasive so as to substantially limit or interfere with an individual's work environment, educational performance, participation in extracurricular activities or equal access to the university's resources and opportunities. Harassment is a form of discrimination. Constitutionally protected expression cannot be considered harassment under this policy.

Complainant: The individual who is alleging the occurrence of discrimination.

Respondent: The individual against whom allegations of discrimination, harassment or retaliation have been made.

Retaliation Prohibited

Retaliation is a form of discrimination. The university prohibits retaliation against any party who, in good faith, reports, assists or participates in an investigation under this policy.

Retaliation, if found to have occurred, is considered an offense separate from the original complaint of discrimination or harassment. The university will take disciplinary action against those who participate in retaliatory behavior. Individuals who believe they have been subjected to retaliation should report the conduct to the Office of Social Equity as promptly as possible.

Complaint Process for Allegations Against Students

The procedures for processing a discrimination, harassment or retaliation complaint against a student (student to student or allegations in which the alleged offender is a student) are addressed through a formal student conduct proceeding, which is described in and governed by the Student Conduct Policies and Regulations. For more information, please refer to the Office of Student Conduct website on policies: www.iup.edu/student-conduct/policies.

To make a complaint against a student who is alleged to have engaged in discrimination, harassment or retaliation and to discuss options, contact the Office of Student Conduct, 307 Pratt Hall, 724-357-1264. If the individual does not want to proceed with a conduct complaint or police report against a student alleged to have violated this policy, the university's Office of Social Equity may still investigate, but may be limited in its ability to do so.

Complaint Process for Allegations Against Employees, Vendors, and Volunteers

Any member of the university community who believes he or she may have experienced discrimination, harassment or retaliation in violation of this policy by an employee, vendor or volunteer may use either the informal resolution process or the formal complaint process, or both. The informal resolution and formal complaint processes described in this policy are not mutually exclusive and neither is required as a pre-condition for choosing the other; however, they cannot both be used at the same time. Anonymous complaints will be individually assessed for credibility and with regard to the extent they can be investigated.

- A. **Informal Resolution:** This process may be used as a prelude to filing a formal complaint or as an alternative. It is not necessary that this option be used. Anyone who believes that he or she has been subject to discrimination, harassment or retaliation may immediately file a formal complaint as described below. Informal resolution may be an appropriate choice when the conduct involved is not of a serious or repetitive nature, and disciplinary action is not required to remedy the situation. No formal investigation is involved in the informal resolution process.
 1. **Reporting:** Individuals wishing to use the informal resolution process should contact the Office of Social Equity. If individuals in the Office of Social Equity or the designee appointed by the Office of Social Equity are part of the alleged discrimination, harassment, or retaliation, the Associate Vice President for Human Resources should be contacted instead.
 2. **Assistance:** The individual is provided assistance in attempting to resolve possible discrimination if the individual does not wish to file a formal complaint. Such assistance includes strategies for the individual to effectively inform the offending party that his or her behavior is offensive and should cease. Action should be taken by an appropriate university official to stop the offensive conduct, modify the situation in which the offensive conduct occurred, or begin mediation between the parties. However, the university may take more formal action to ensure an environment free of discrimination.
 3. **Time frame:** The Office of Social Equity or designee shall make a good faith effort, with the complainant's written consent, to resolve the complaint in a timely manner consistent with the complexity and severity of the matter. Any resolution efforts extending beyond 15 working days shall be noted.
- B. **Formal Complaint:** The goal of the formal complaint process is to reach an official determination as to whether a respondent(s) has violated this policy. As a part of the formal complaint process, an adequate, reliable and impartial investigation will be conducted into the allegations of the complaint and a report of the investigation prepared.
 1. **Reporting:** Complaints must be made to the university's Office of Social Equity. The complaint should include the complainant's name and contact information; the name of the person(s) directly responsible for the alleged violation; a detailed description of the conduct or event that is the basis of the alleged violation; the date(s) and location(s) of the occurrence(s); the names of any witnesses to the occurrence(s); the resolution sought; and, any documents or information that is relevant to the complaint. While an investigation may begin on the basis of an oral complaint, the complainant is strongly encouraged to file a written complaint. Complaints should be filed as soon as possible after the conduct giving rise to the complaint, but no later than 30 working days after the event occurred. This deadline may be extended by the designated investigator based on extenuating circumstances.
 2. **Notice of Allegation:** As part of the investigation process, the respondent shall be provided with a copy or summary of the allegations and be given the opportunity to respond verbally and/or in writing within a reasonable time frame. The response should include the names of any witnesses or other evidence the respondent may wish to have considered.
 3. **Investigation:** The fact-finding process is intended to be an internal investigation, not an adjudicatory process. The strict rules of evidence and criminal or civil procedure do not apply. The com-

plainant and the respondent may present any document or information that is believed to be relevant to the complaint. Any persons thought to have information relevant to the complaint shall be interviewed and such interviews shall be appropriately documented. The respondent and the complainant are permitted to have a union representative present as an advisor, if applicable. Allegations or matters of conduct outside the scope of this policy may be referred to the appropriate official for review and action.

4. **Timing:** Within 10 working days of receipt of a complaint, an investigation of the complaint will be undertaken. The investigation of a complaint will be concluded as soon as possible after receipt of the complaint, consistent with the complexity and severity of the matter. For investigations exceeding 60 days, a justification for the delay shall be included in the written report.
 5. **Written Report:** Upon completion of the investigation, a written report will be issued. The report shall include: a statement of the findings of fact, including an analysis of the facts discovered during the investigation; a statement of conclusions the investigator has drawn, if any; and any other relevant information deemed appropriate to the findings of fact. Both the complainant and the respondent shall be provided an opportunity to review a summary of the written report and submit comments.
 6. **Review:** The President or designee, as appropriate, will review the summary of the written report, the written report and any comments submitted by the complainant or respondent. The President or designee may request further investigation; dismiss the complaint if the results of the completed investigation are inconclusive or there is insufficient evidence, based on a preponderance of the evidence, to support the allegation(s); or find this policy was violated. The President or designee will determine what appropriate action, if any, will be taken. A pre-disciplinary conference will be held prior to issuing any discipline, consistent with the disciplinary procedures proscribed in any applicable labor agreement. The university shall take steps to prevent the recurrence of discrimination, harassment or retaliation under this policy and to correct any discriminatory effects on the complainant and others, if appropriate.
 7. **Notice of Outcome:** Once the President or designee has rendered a decision and notified the respondent in writing, the formal investigator shall, to the extent permitted by the Family Educational Rights and Privacy Act, notify the complainant, in writing, of the results of the investigation and the action taken by the university to resolve the complaint. At the conclusion of the formal investigation, all records from the formal resolution process will be retained in accordance with the university's records retention policy. records of investigations will not be maintained in personnel files unless formal disciplinary action is taken.
- C. **Appeal and Reporting to Outside Entities:** The respondent may appeal any discipline rendered as provided in the grievance procedures of his or her respective labor agreement or the Board of Governors' Merit Principles Policy (Policy 1983-01-A), as applicable. The complainant has the option at any time during informal resolution or formal complaint process to file a complaint through an external public agency responsible for enforcing laws regarding discrimination. Generally this filing should take place within 180 days beginning with the date of the last alleged incident.

Equal Employment Opportunity Commission, www.eeoc.gov
1000 Liberty Avenue, Pittsburgh, PA 15222, 412-644-3444

Pennsylvania Human Relations Commission, www.phrc.state.pa.us
300 Liberty Ave., State Office Bldg., 11th Floor, Pittsburgh, PA 15222
(412) 565-5395

US Department of Education, Office for Civil Rights,
www.ed.gov/about/offices/list/ocr/index.html
400 Maryland Avenue, Washington DC, 20202-5151, (800) 421-3481

- D. **Privacy:** The university will endeavor to honor an individual's desire for privacy, to the extent permitted by law, which still allows the university to provide an environment free of discrimination. Relevant

information will be provided to those persons who need to know in order to achieve a timely resolution of the complaint.

- E. **False Complaints:** Any person who knowingly and intentionally files a false complaint under this policy or any person who knowingly and intentionally makes false statements within the course of the investigation is subject to disciplinary action up to and including termination of employment.
- F. **Dissemination of Policy:** The policy will be posted on the university's website and copies will be made available to all members of the university community, including employees (administrators, faculty, and staff), volunteers, students, vendors and all applicants for admission or employment upon request. Periodic notices will be sent to employees and students which will include referral information and information about the complaint procedures. The university will periodically educate and train employees and supervisors regarding the policy and conduct that could constitute a violation of the policy.

The policy was established on April 26, 2016. Questions about the policy should be directed to the Office of Social Equity, Delaney Hall, Suite B17, phone: 724-357-3402.

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, 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 on 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:

Freshmen	Fewer than 30 credits
Sophomores	30-59 credits
Juniors	60-89 credits
Seniors	90 credits or more

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

Excess Credit Load

A student who wishes to schedule 18 or more credits must obtain approval from the dean of the college of the student's major; approval will be predicated on 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.

Schedule Changes (Drop/Add)

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), 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 MyIUP. Each student is responsible for completing all appropriate transactions in MyIUP 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 MyIUP.

Experiential Learning

Internship Experiences

University-sponsored internships are often an important part of an academic program. Students may apply for an internship if they have completed 60 credits and have at least a 2.0 GPA. Forty hours of supervised internship is equivalent to one academic credit hour. A maximum of 12 credits is applicable to an undergraduate degree program from internship experiences. Internships are available at a variety of venues, such as governmental agencies, businesses, foundations, and other organizations.

Students who are interested in internships must consult with their program's academic advisor, since they may need to meet additional internship requirements specific to their program, department, or college.

In all cases, an approved agreement between the university and the external organization at which the internship will be performed must be in place before the student can be enrolled for internship credit.

Cooperative Education (Co-ops)

Some departments allow students to participate in cooperative education experiences. These experiences provide students with opportunities to gain practical work experiences related to their academic programs. These experiences may be the first contact students have working in their profession. They are often offered for zero credit and are typically unpaid.

Students may apply for co-ops if they have completed 30 credits and have at least a 2.0 GPA. They typically participate in these programs during their sophomore or junior years, often during the summer. Interested students

need to consult with their academic advisors concerning the availability and requirements of co-ops within their department.

In all cases, if students decide to register for a co-op course, an approved agreement between the university and the external organization at which the co-op experience will be performed must be in place before the student can enroll in the course.

Prior Learning and Credit/Exemption Examinations

There are a variety of examinations through which students may earn college credit or exemptions. Courses for which credits or exemptions are awarded by examination will not be used in the determination of GPAs.

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. A student who passes an exemption examination will be exempt from taking that course in his/her academic program. If a student is granted exemption only (no credits) from a course, he/she may need to take another course to fulfill degree requirements.

Where examinations are not available, portfolio assessment may provide a student with the opportunity to earn university credit for college-level learning gained through work and life experience. Each department will determine the maximum number of credits to be awarded for portfolio assessment for its majors.

No more than one-half of the credits required for a student's major may be earned through any combination of examinations or portfolio assessment, nor can these credits be applied toward university residency requirements for awarding of degrees.

Advanced Placement Examinations

Courses taken by students before college admission under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit. Those who earn a score of 3, 4, or 5 in the Advanced Placement Examination may be granted credit toward the number of credits required for graduation. For questions regarding the granting of Advanced Placement Examination credits, consult with Transfer Services in the Admissions office.

CLEP Examinations

Students who have had other opportunities for instruction or who have advanced in a given field may gain credit for a course through the College Level Examination Program (CLEP) offered through University Testing Services. For questions regarding the granting of CLEP examination credits, consult with Transfer Services in the Admissions office.

International Baccalaureate Examinations

Courses taken by students before college admission under the International Baccalaureate Program may be recognized by the award of college credit. Those who take and pass the Higher Level examination with a 4 or higher may be granted credit toward the number of credits required for graduation. For questions regarding the granting of International Baccalaureate examination credits, consult with Transfer Services in the Admissions office.

Departmental Examinations

In some departments, 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.

Portfolio Assessment

Portfolio assessment may provide some students with the opportunity to present evidence of learning for evaluation by a faculty member. It is designed for those with extensive documentable knowledge from work experience, travel, independent study, or other out-of-class experiences. Through portfolio assessment, these experiences are evaluated to determine their appropriateness and applicability for university credit.

Credit awarded through portfolio assessment must conform to specific course titles in the *Undergraduate Catalog* (i.e., no credits will be awarded for general areas of knowledge) and will only be awarded for undergraduate courses. Only currently enrolled students are eligible to request portfolio assessment, and any credits awarded must be intended for use as part of a degree or certificate program.

Before portfolio assessment credits can be awarded, approval must be obtained from the chairperson of the department offering the course, the dean of the appropriate IUP college, and the director of the Office of Extended Studies. Once approved, the title of the course, the credits, and indication that credit was earned through portfolio assessment will be recorded on a student's academic record.

If a related examination is available through the College Level Examination Program (CLEP) or if a departmental examination has previously been established for the course, a portfolio assessment of those credits will not be accepted.

For information about portfolio assessment fees and instructions on how to apply for portfolio assessment, consult with the Office of Extended Studies.

Change of Major

To qualify for a change of major, a student must be in academic good standing (2.00 cumulative GPA). This requirement does not apply to students in their first semester at IUP without a GPA. All students must meet any other requirements specific to the new major. All teacher certification programs have requirements beyond a 2.00 GPA. Please refer to the individual college sections in this catalog for change of major policies pertaining to specific colleges and majors.

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, the student should 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 affected.

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 veterans' counselor at least one month before the effective date of the change. No change of major shall be made by veterans until VA approval has been assured.

Academic Advising

All students are assigned academic advisors. 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. The student is then assigned an academic advisor for the remaining years 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 signing in to MyIUP (my.iup.edu), selecting the "Academics" page, and then under the "Advising" section, selecting "Advisor contact information." Students should then contact their advisors. Should a student fail to identify an advisor, he/she may contact the chairperson of the department for an advisor assignment.

While a faculty member serves to advise the students as they progress to graduation, students are ultimately responsible for knowing and fulfilling the requirements for graduation in their degree program.

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.

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:

1. 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.
2. Each policy must define some limited level of allowable absence.
3. Each policy must recognize students' need to miss class because of illness, personal emergency, university-sponsored activities, bereavement, or active military duty.
4. 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 before adding the class.

Bereavement-related Class Absences

The university community recognizes the impact that the loss of a family member or loved one may have on the emotional and academic wellbeing of a student. In such circumstances, a student may request that a bereavement absence notification be sent to their faculty by contacting either the Department for Disability Access and Advising or the dean's office of the college of their major, who will send an e-mail to the student's faculty stating that the student is away from the university due to the death of a family member or loved one. Documentation that verifies the death (e.g., a funeral program, death notice, obituary, etc.) and the nature of the student's relationship to the deceased may be requested.

The university encourages allowances for the grieving process, while acknowledging the faculty member's right in determining the terms of variance from the course syllabus. The student is expected to take the initiative to make all arrangements for meeting academic requirements. The university community also encourages students affected by a loss to contact the IUP Counseling Center or other university and community resources, as appropriate, if they are in need of ongoing emotional support.

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 from the course syllabus. Ideally, the student is expected to notify the professor as soon as the student knows that a class will be missed due to a university sponsored event. The faculty may request documentation signed by the activity director, coach, or advisor detailing the specifics of the event in advance.

The student must take the initiative to make all arrangements for meeting academic requirements before the anticipated class absence. Excused

absences for participation in university-sponsored events will not result in a penalty to the student, provided that the student makes up missed work as required by the professor.

Evaluation of Student Progress by Level or Standing

Each college shall determine a scheme for evaluating the development and progress of its major students.

A college may use a screening procedure that requires all students enrolled in a specific semester or who will complete a specified number of credits attempted by the end of the current semester to apply for approval for advancement.

All students should check with their faculty advisors to determine if their college uses a screening procedure and, if one is used, what the criteria for that procedure are. Students should also refer to their college's section of the Undergraduate Catalog.

University Policy on Semester Course Syllabi

Each faculty member shall prepare and distribute a course syllabus, without charge, to each student within one week of the start of the course. 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. Course syllabi may be distributed in hard copy or electronic versions. The 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.

Inclement Weather Policy and Procedures

IUP 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 period of adverse weather conditions is based on the overall concern for the university community.

In the event of cancellation of classes or events, or closure of the university, a notification will be provided via the list below.

Radio: WDAD-AM 1450; WCCS-AM 1160; U-92 FM 92.5; WTAE-AM 1250; KDKA-AM 1020

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

Other Media: IUP website: www.iup.edu; IUP Information Line: 724-357-7538; IUP Daily, IUP text subscribers, social media

The university's Inclement Weather Policy and Procedures is available at www.iup.edu/weatherpolicy. Questions regarding this policy may be directed to the Office of Human Resources, 724-357-2431.

The president has the authority to cancel or postpone IUP-sponsored or hosted activities or events due to inclement weather conditions or other environmental factors that may jeopardize the safety of patrons traveling to or from the event. If a decision is made to cancel or postpone the activity or event, the vice president of the sponsoring division will assume responsibility for notifying activity or event participants of the cancellation or postponement in an appropriate and timely manner.

Grading Policies

After each semester or session, a grade report will be available to each student by signing in to MyIUP (my.iup.edu).

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
A	Excellent	4 quality points/credit
B	Good	3 quality points/credit
C	Average	2 quality points/credit
D	Pass	1 quality point/credit
F	Fail	0 quality points/credit
N	Non-Participation	
	Fail	0 quality points/credit
P	Pass	0 quality points/credit (for credit courses only)
S	Satisfactory	0 quality points (for 0-credit courses only)
U	Unsatisfactory	0 quality points (for 0-credit courses only)

Other Designations (carrying no quality points):

AUD	Audited Course
EXM	Examination
FOL	Portfolio Assessment
I	Incomplete—For more information, see policy explanation.
L	Late Grade/Continuing Course—For more information, see policy explanation.
OL	Other Location
Q	Total Semester Withdrawal—Used before 2002 when a student had totally and officially withdrawn from the university for a given semester
R	Research in progress (graduate thesis/dissertation only)
TR	Transfer
XMT	Exemption
W	Withdrawal—For more information, see policy explanation.
*	Grade not reported by instructor. 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 that has amended the student's cumulative grade point average.

.	Institutional Credit (credit counts toward enrollment status but does not count toward graduation or in GPA calculation)
..	Canceled Semester (see policy explanation)
*	Fresh Start (see policy explanation)
:	Extended Credit (graduate thesis/dissertation only)

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.

Quality points are not calculated for credits from other schools (i.e., 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 Office of the Registrar, to the department chairperson, and to the student. Audit students have the same privileges as other students in all course work. 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), “F” (failure), or “N” (nonparticipation failure) by using MyIUP (*my.iup.edu*).

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 toward the total credits earned for graduation but not toward 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 an “F” or “N” (non-participation failure) grade and the corresponding grade point average. An “F” or “N” earned under the pass/fail option may be repeated only under the graded option. (Currently, one course is an exception to the Pass-Fail Course Policy. NMDT 434 is offered only on a pass-fail basis.)

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.

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 member 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

concur. 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 IncomA 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 course work, or notification by the student that the course work 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

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 course work 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 members wanting to use the “L” option for eligible courses must notify the registrar two weeks before the end of classes so that the grades can be pre-entered. “L” designations that 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 members as they help students complete their course work.

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

Grade Change Policy

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 on 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

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, F, and N 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,” “F,” or “N” grade by repeating that course at IUP. No more than six repeat-with-replacement attempts are permitted for undergraduate students. A single course can be repeated a maximum of two times. 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,” “F,” or “N” grades must repeat these courses at IUP. If an IUP course in which a student received an “F” or “N” is repeated at another institution, the credit will transfer to IUP if the course grade is “C” or better, but the original “F” or “N” 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):** Students seeking to replace or average “D,” “F,” or “N” grades must repeat these courses at IUP. If an IUP course in which a student received an “F” or “N” is repeated at another institution, the credit will transfer to IUP if the course grade is “C” or better, but the original “F” or “N” 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.
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.

Canceled Semester Policy

The Canceled 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 (24 consecutive months).

Semester to be canceled refers to any semester of enrollment, whether full- or part-time. Students may elect to use an enrolled summer as their “semester” to be canceled. 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 canceled 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

A student who has been separated from the university for a minimum of two calendar years (24 consecutive months) 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 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 course work taken before readmission under this policy shall remain on the transcript. Upon readmission, a new cumulative (GPA) is established based on 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 before 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 rematriculation. A student readmitted under this policy waives the right to exercise the Canceled Semester Policy.

Academic Honors

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

Provost Scholars

Provost Scholars are recognized annually. At the start of the fall semester, any undergraduate student who meets all of the following requirements will be named a Provost Scholar if he or she

- is a candidate for first bachelor’s degree,
- is a current junior or senior with a minimum of 45 credits earned at IUP,
- has a cumulative GPA of 3.50 or higher,
- has not 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 course work, or a combination of graded undergraduate course work and graded graduate course work applying to the baccalaureate degree.

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

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.

Individual Course Withdrawals may be processed by signing in to MyIUP (*my.iup.edu*) between the day after the conclusion of the drop/add period and the end of the first two-thirds of the course. After the two-thirds point of a course, students may no longer process Individual Course Withdrawals.

A student needing to withdraw from a course after the deadline must process a request through the office of the dean of his or her college. Approval of the late withdrawal is contingent on documentation of catastrophic circumstances preventing the student from completing the course. If approved, the college office will arrange for recording the “W” designation.

Since instructors inform students of their unsatisfactory performance in class before the withdrawal deadline (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 activities that require full-time status, such as financial aid eligibility (percent of completion and eligibility to move to the next class level), athletic eligibility, and health insurance. 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 term with the option of withdrawing from all classes, and thus from the university, for that term. During the fall and spring semesters, Total University Withdrawals may be processed between the first day of classes and the end of the 11th week of the term. During summer and winter terms, the deadline is the two-thirds point of each course for which the student is registered. Questions about academic impact of withdrawal should be directed to the dean or his/her designee of the student's college (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 on documentation of catastrophic circumstances preventing the student from completing the term. Approved waivers must be submitted to the Office of the Student Advocate and include the Total University Withdrawal Form for processing.

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 should first review information on withdrawals on the Academic Success Center website (www.iup.edu/success) and confirm the financial impact of withdrawal by meeting with a representative from Financial Aid. Then they must process a Total University Withdrawal Form either via MyIUP (my.iup.edu) or by form completion with the Office of Student Advocate. Once the Total University Withdrawal has been processed, a withdrawal designation (“W”) will be assigned to all registered courses from which the student is withdrawing. There are no financial leniencies for withdrawals caused by medical situations. IUP's percentage of forfeiture rates follow state and federal dictates, which do not address medical situations.

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

Involuntary Withdrawal Policy

Purpose: The purpose of this policy is to provide a procedure for determining whether an identified student's behavior poses a direct threat (as defined herein) and for responding to such behavior. Rarely does student behavior pose a direct threat. However, involuntary withdrawal may be appropriate when

- the student displays behavior that is not prohibited by and/or could not be adjudicated by the Student Behavior Regulations or the Academic Integrity Policy, but that nonetheless poses a direct threat; and
- the student demonstrates a risk of repeated display of such behavior.

Policy: In the absence of other reasonable means or university procedures available for addressing a student's behavior that poses a direct threat, the university will conduct an individualized assessment of the student behavior and circumstances related to the observed behavior of concern and, if appropriate, implement the involuntary, total withdrawal of the identified student from the university.

The student may appeal an involuntary withdrawal decision or may seek re-enrollment to the university at a later time, in accordance with the guidelines and procedures articulated below. The decision regarding an appeal or re-enrollment request will be considered on the basis of whether the student continues to pose a direct threat.

The policy will be applied in a nondiscriminatory manner, and decisions will be based on consideration of the student's conduct, actions, and statements, not on knowledge or belief that the student has a disability.

Definitions:

- A. **Direct Threat:** behavior that poses
- significant risk to the health or safety of others, or
 - significant risk of damage to university property, or
 - substantial disruption to the activities or education of other students
- B. **Significant Risk:** behavior that has a high probability (not just a slightly increased, speculative, or remote risk) of substantial harm to the university community, given information concerning the behavior that is available at the time of consideration
- C. **Substantial Disruption:** behavior that continually and considerably interferes with other students' participation in academic, work, extra-curricular, housing/residence life, or other university-related activities

Procedures:

A. Review Process

1. When made aware of an identified student whose behavior could warrant involuntary withdrawal, the vice president for Student Affairs (or designee) will convene and oversee an Involuntary Withdrawal Review Team to conduct an individualized assessment of the student behavior and circumstances related to the observed behavior of concern and advise him/her whether a direct threat exists. Members of this team will include a representative from the Health Service, the Counseling Center, Disability Support Services, and the student's academic dean (or designee). Depending on the nature of a particular case, and in accordance with FERPA and other relevant laws, other individuals who can assist in evaluating the potential risk posed by the student's behavior, including professionals qualified to interpret the information available for consideration, may be identified to advise the vice president and review team.

The goal of the vice president and review team will be to ascertain whether the student's behavior poses a direct threat. Factors to consider may include

- the nature, duration, and severity of the risk of harm;
 - the likelihood that the potential harm will occur;
 - if the student asserts to have a legally protected disability entitled to reasonable accommodation, whether reasonable modification of university policies, practices, and procedures would sufficiently mitigate the risk.
2. The vice president and review team may request to review educational records and/or to consult with various university community members or others who may be knowledgeable of the student and/or the behavior of concern.
 3. The vice president and review team may request that the student take part in a medical/psychological evaluation. In such a case, the vice president and review team will identify a qualified and licensed health professional who is independent from the university to conduct the evaluation. The university will be responsible for the fees associated with this evaluation.
 4. The vice president and review team will request a personal meeting(s) with the student. Although it is highly desirable that the student choose to attend such a meeting(s), the review process may proceed if he/she does not attend. Furthermore, the direct threat review process will proceed regardless of the student's

ongoing university status. At the meeting(s), the vice president and review team will present and discuss the information that is available for consideration. The student may choose to have an advocate accompany and take part with him/her in the meeting(s).

5. Based on the review team's assessment, including consultation with professionals qualified to interpret the information available for consideration, the vice president may conclude that a direct threat exists and, if so, will determine an appropriate next step, which may entail involuntary, total withdrawal of the student from the university but would not preclude other actions depending on the particular situation.
6. The review decision will be communicated by the vice president to the student and will provide the primary information that led to the decision. Any conditions for later re-enrollment will also be communicated at that time. The decision and related information will be communicated in writing to the student and may be additionally communicated in other forms if the situation permits.
7. At any time before conclusion of the review process, the student may withdraw voluntarily.

B. Appeal Process

1. The decision of the vice president may be appealed in writing by the student to the IUP president.
2. An appeal must be filed within 90 calendar days after the decision of the vice president is communicated in writing to the student.
3. The president's decision on the appeal will be final and conclusive.
4. During the appeal process, the student will remain totally withdrawn from the university.

C. Re-enrollment Process

1. A student for whom the vice president for Student Affairs concluded a direct threat exists may later request re-enrollment to the university. A request must be made to the vice president for Student Affairs. In his/her request, the student should provide evidence that he/she would no longer pose a direct threat and that any conditions for re-enrollment have been met. Such student is responsible for any fees associated with treatment, activities, and/or evaluations that he/she has taken part in or obtained in an attempt to demonstrate appropriateness for re-enrollment.
2. The vice president will convene and oversee the Involuntary Withdrawal Review Team regarding the re-enrollment of the student.
3. The vice president and review team may request an updated, independent, university-obtained medical/psychological evaluation and/or request to meet with the student. The university will be responsible for the fees associated with this evaluation.
4. The decision of the vice president will be based on a determination of whether the student can return safely to the university community and no longer pose a direct threat.

D. Emergency Situation

At any time before the initiation or conclusion of the review process, the vice president may implement an interim involuntary withdrawal of the student from the university, should immediate action appear warranted. A review process, as outlined above, will occur as soon as reasonably possible to consider the interim decision.

Reversion: This policy will not be rescinded or modified except by action of the IUP president, following consultation with the University Senate, and in accordance with University Senate Bylaws and Constitution.

Publications Statement: The IUP Office of the Vice President for Student Affairs will publicize and transmit this policy to all members of the university community.

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 Loan, (2) Subsidized Federal Direct 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 that 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 or her federal aid.

In addition to affecting 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 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 Department for Disability Access and Advising, 216 Pratt Hall, www.iup.edu/disabilitysupport or e-mail at disability-access@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, (www.iup.edu/graduatestudies).

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 before the call to active military duty.

For federal student aid recipients, the return of Title IV student aid will be applicable. Students who previously received a refund from their Title IV federal aid awards, may have to return these funds to the university so that federal aid programs can be credited appropriately.

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 Department for Disability Access and Advising 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 apply for readmission, which will be granted under this policy.

Questions may be addressed to the Office of the Registrar, 300 Clark Hall, (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.

B. **Terminology**

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 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 during the next semester for which they are registered.
4. *Academic Recovery Plan:* Students whose CGPA falls below the 2.00 standard must develop an Academic Recovery Plan for achieving Academic Good Standing.
5. *Academic Recovery Hold:* An Academic Recovery Hold is placed on the records of students who fail to submit an Academic Recovery Plan, preventing them from processing any registration transaction.

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 semester.
 - a. Students earning a 0.00 CGPA at the end of their first semester of enrollment will be dismissed from the university, except for students enrolled in only one course (up to 4 credits), who may be placed on probation at the discretion of the appropriate Academic Standards officer.
 - b. Other students falling below the 2.00 CGPA standard will be placed on probation at the end of the semester. They may continue on probation for one semester. They will be required to develop and implement an Academic Recovery Plan.
 - c. Students still below the 2.00 CGPA 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 permitted another semester of probation and, where appropriate, extended probation.
 - f. Students who fail to establish an Academic Recovery Plan before the beginning of registration for the next semester will incur an Academic Recovery Hold preventing registration.
 - g. Students referred by the Office of Admissions for first-year study at a regional campus may transition to the Indiana campus upon achieving 24 credits through two regular academic semesters at a 2.00 CGPA.
 - h. Students admitted through the Department of Developmental Studies remain under the direction of the department for at least an academic year after initial enrollment and until reaching the 2.00 CGPA standard.

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 (or designee).

1. *Analysis:* Students must identify the factors contributing to 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 changes in behavior necessary to achieve academic success. This might include better 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 (or designee).
4. *Documentation:* Each plan must include an explanation of satisfactory methods of documentation. It is the student's responsibility to provide documentation supporting compliance with the agreed upon plan, if requested.

E. **Readmission**

1. Students dismissed under this policy may not be readmitted for at least one calendar year.
2. Dismissed students may, after one calendar year, apply for readmission through the Office of the Registrar.
 - a. A decision for readmission of a student in probationary or dismissed status, regardless of whether the student was dismissed by the university or the student voluntarily withdrew, is 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 Office of the Registrar will officially change the major based on the Academic Standards officer's readmission letter to the student.
 - b. A decision for readmission of a student enrolled at a regional campus at the time of dismissal or voluntary withdrawal, regardless of whether the student was dismissed by the university or the student voluntarily withdrew, is the responsibility of the Academic Standards officer of the regional campus.
 - c. A decision for readmission of a student enrolled in the Department of Developmental Studies/Act 101 at the time of dismissal or voluntary withdrawal is the responsibility of the Developmental Studies Academic Standards officer.
3. Those students who, in the opinion of the appropriate Academic Standards officer, are likely to achieve academic success may be readmitted.
4. Students may be readmitted only once under this policy. Subsequent readmission may be available under the Canceled Semester Policy or the Fresh Start Policy.

IUP Student Grade Appeal Policy

Purpose

Grade Review and Grade Appeal are designed as means to resolve differences between students and faculty members related to grading.

Grade Review

A student may disagree with the instructor's professional evaluation of his or her work but have no grounds for making an appeal based on a claim of discrimination, capriciousness, and/or error as defined below. In these cases, 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. If resolution does not occur during grade review, the decision of the instructor shall be final. If there is basis for claiming discrimination, capriciousness, and/or error, the student may proceed with a grade appeal.

Grade Appeal

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

1. **Discrimination:** On the basis of race, ethnicity, color, religion, national origin, sex, age, ancestry, disability, gender identity, sexual orientation, veteran status, 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. Disagreement with the instructor's professional evaluation is not sufficient by itself for a claim of capriciousness.
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. Once a student has determined the proper grounds for appeal, he or she 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 that offers the course. 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 Office of the Provost will seek additional members from the appointing bodies. If these bodies are unable to respond in a timely manner, the Office of the Provost 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 Office of the Provost. This form must be filed within 60 calendar days of the beginning of the semester immediately following the semester in which the grade was received. The Office of the Provost may extend the 60-day limit only in unusual circumstances when equity demands it. (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 Office of the Provost will notify the appropriate dean, department chairperson, instructor, APSCUF president, and the Student Government Association president of the student's initiation of the Level II process.
- C. **Procedure to Process Appeal:** In addition to the appeal form, the student will be expected to submit pertinent information/documentation and rationale for his/her complaint, which will serve as supporting evidence. The faculty member instructor will be expected to submit in writing the course grading procedure and any other pertinent information. The director of Social Equity or designee will advise in appeals based on discrimination. Appeals based on capriciousness will be reviewed in light of the instructor's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuation. Denial of appeal continuation must be by a negative vote of a majority of those present. This committee will immedi-

ately inform the Office of the Provost 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 instructor of the findings. If the basis for appeal is determined to be substantive, the provost or designee will schedule a Level III Grade Appeal Panel within 15 class days to be convened before the conclusion of the semester.

Level III: Appeal Review

- A. **Composition:** The Grade Appeal Panel will consist of five voting members: one academic dean or assistant/associate dean and four faculty members. The Student Government Association Executive Committee designee may advise as requested by the student. The director of Social Equity or designee will advise in appeals based on discrimination. The panel will be constituted from the Grade Appeal Pool by random selection. The panel chairperson will be elected by and from the panel before each review.
- B. **Membership:** The Grade Appeal Pool will be established in the spring semester to serve for the following academic year. Using random selection methods, the pool will be established by the Office of the Provost. A pool of three deans or assistant/associate deans and 12 full-time faculty members will be maintained. To establish the membership for each appeal panel, before each appeal, the names of pool members will be supplied to all parties involved. A panel member must recuse him or herself if there is a conflict of interest. The student and the instructor each may eliminate only one dean or assistant/associate dean and two faculty members. The opportunity to disqualify panel members will take place only once. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Office of the Provost 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 proceedings.
 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 Office of the Provost will assemble a committee of three appropriate faculty members (knowledgeable in the discipline but excluding the instructor against whom the complaint was lodged), who will review the student's work and recommend to the panel the appropriate grade or suitable remedy. The panel will incorporate this recommendation in its determination, which it then forwards to the Office of the Provost for implementation, ordinarily within 30 days. The Office of the Provost will initiate the processing of grade changes resulting from Level III decisions. The Office of the Provost will notify the student of grade changes resulting from Level III decisions.
 3. The written report sent to the Office of the Provost 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 instructor 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. **Amendment:** Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss. In the amendment process, 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.
- B. **Appeals on Procedural Grounds:** Decisions may not be challenged merely because the Office of the Provost fails to comply with Ancillary Provisions E, J, or I.

- C. **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.
- D. **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.
- E. **Discrimination:** 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.
- F. **Dissemination of Grade Appeal Information:** The Office of the Provost 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. **Faculty Compensation:** If a Level III Grade Appeal Panel (hearing) is scheduled at a time when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.
- H. **Intended Purpose:** Unless there is intentional misrepresentation, the results of a grade appeal may not be used for disciplinary action of students or instructors.
- I. **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 instructors in the grade appeals process will be referred to the Office of the Provost.
- J. **Support Mechanism:** The Office of the Provost, after consultation with the Senate Academic Committee and APSCUF, will be responsible for identifying a pool of at least 10 faculty members well versed in the preparation of grade appeals who will be available upon request to help students or faculty members prepare documentation for the grade appeals process.
- K. **Tenure and Promotion Committee Membership on Grade Appeals Committees:** Members of the university-wide tenure and promotion committees may not serve concurrently on grade appeals committees.
- L. **Training/Support:** Upon request, the Office of the Provost will offer 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.

Academic Integrity Policy

IUP is committed to the fundamental values of academic integrity. Academic integrity means honesty and responsibility in scholarly endeavors and behaviors; it means that all academic work should be the result of an individual's own effort. Academic assignments help students learn and allow them to exhibit this learning. Grades are an assessment of the extent to which learning has been demonstrated in assignments. Therefore, academic work and grades should be the result of a student's own understanding and effort. All members of the IUP community—including students, faculty, and staff—are responsible for maintaining academic integrity, which includes knowing what IUP's academic integrity policies are and being able to identify academic misconduct. Academic misconduct includes any action which improperly impacts the assessment or representation of a student's academic achievement. Academic misconduct may result in disciplinary action, including expulsion from the University.

Types of Violations

Academic integrity violations can take many forms. Violations of IUP's standards of academic integrity include, *but are not limited to*, the following broadly defined categories:

1. **Plagiarism:** Plagiarism is a type of fraud that involves stealing someone else's work and lying about it. Using someone else's words, ideas, or data as if it were one's own work is plagiarism. Plagiarism applies to any type of source, whether published or unpublished, and to any type of assignment, whether written, verbal, or otherwise. Plagiarism can be avoided simply by acknowledging that certain material is the work of another, and then providing a citation that gives a reader the information necessary to find the source of the work. Any assignment submitted by a student that includes the words, ideas, or data of another must include complete, accurate, and specific references. Any verbatim statements must also include quotation marks. More information about what constitutes plagiarism and how to avoid it can be found online at the Office of the Provost website (www.iup.edu/academicintegrity).
2. **Fabrication:** Fabrication means making something up to deceive or mislead someone. This includes, but is not limited to, the use of fictitious data, research, citations, or any other kind of information. Fabrication also includes making false claims to influence testing or grading, or to gain academic credit. More information about what constitutes fabrication and how to avoid it can be found online at the Office of the Provost website.
3. **Cheating:** Cheating is an attempt to misrepresent one's mastery of information or skills being assessed. Cheating takes many forms; it includes, but is not limited to, using (or attempting to use) unauthorized materials, assistance, information, devices or study aids in any academic exercise. Cheating also includes, among other things, using the same paper or work more than once without authorization of the faculty member to whom the work is being submitted. More information about what constitutes cheating and how to avoid it can be found online at the Office of the Provost website.
4. **Technological Misconduct:** Computer dishonesty, as addressed by university computing policies, includes, but is 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; and using or installing or attempting to use or install software not properly licensed. More information about what constitutes technological misconduct and how to avoid it can be found online at the Office of the Provost website.
5. **Academic Dishonesty:** Academic dishonesty consists of any deceitful or unfair conduct relevant to a student's participation in a course or any other academic exercise or function. Academic dishonesty includes, but is not limited to: tampering with grades, any action that unfairly impacts the assessment of one's academic work, disrupting or interfering with the learning environment or the ability of others to complete academic assignments, intentionally evading IUP academic policies and procedures, or failure to comply with previously imposed sanctions for academic violations. Academic dishonesty also includes violations of student conduct policies, as related to the academic environment. A comprehensive discussion of IUP's policies and student behavior expectations has been compiled in, "*The Source: A Student Policy Guide.*" Down-

loadable copies of “*The Source*” are available online at the Office of Student Conduct website (www.iup.edu/studentconduct).

6. **Facilitating Academic Integrity Violations:** Facilitating academic integrity violations includes attempting to help another engage in an academic integrity violation.
7. **Classroom Misconduct:** Conduct that significantly disrupts the learning process or is a threat to others.

The university reserves the right to discipline any student for the above policy violations and any other action that an ordinary, reasonable, 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 should resolve the matter by Documented Agreement or by Formal Adjudication. *Sanction(s) may not be imposed on a student believed to have violated an academic policy without following one of these procedures.*

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

Options for Resolution

Once an academic integrity violation has been established a faculty member or administrator must use one of the following options to resolve the alleged violation.

1. **Resolution by Documented Agreement**

The faculty member/administrator will schedule a formal conference with the student in an attempt to reach a mutually agreeable resolution. This conference must be scheduled/requested within ten (10) calendar days of the observation or discovery of the alleged violation absent unusual circumstances. If an agreement is reached, the faculty member/administrator must complete a Documented Agreement Referral form outlining the agreement and have it acknowledged by both parties: faculty member/administrator and student. The form is accessible online at MyIUP. 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 by a majority of the committee and the student. Electronic copies of the form are distributed to the student, the faculty member/administrator filing the agreement, the department chair, the Office of the Provost, and the Office of Student Conduct. The form must be filed within 10 days of the conference.

By signing the Documented Agreement, the student waives any right to appeal the sanctions agreed upon and set forth in the Documented Agreement. If the student fails to fulfill the Documented Agreement, the faculty member/administrator may file an academic integrity referral against the student for noncompliance.

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 10 calendar days of the conference with the student.

If a previous academic integrity violation for the student is on record, the matter will be referred to an Academic Integrity Board.

2. **Resolution by Formal Adjudication**

A faculty member/administrator should pursue formal adjudication: (a) if he/she cannot reach, or chooses not to attempt, a Resolution by Documented Agreement with the student regarding the case or sanctions to be imposed; or (b) if the faculty member/administrator believes that the violation is so severe that it warrants sanctions such as: awarding a failing grade on a project or exam when resub-

mitting the project or retaking the exam is not possible; involuntary withdrawal from part of IUP’s academic or other programs; suspension; expulsion; or rescission of a conferred degree.

The faculty member/administrator should file a Documented Agreement Referral form with the department chair within 10 calendar days of the observation or discovery of the violation or within 10 calendar days of the failure to reach a resolution through Resolution by Documented Agreement. If the violation pertains to work being judged by a committee, the form must be approved 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.

Academic Integrity Board (AIB)

The AIB *may be asked* to hear cases filed at the Resolution by Formal Adjudication level. In addition, the AIB will hear all cases in which appeals to the chair’s decision are accepted by the provost/designee. The AIB will also review sanctions in cases of multiple violations.

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. 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. A quorum requires the presence of four (4) people, at least one of whom must be an undergraduate student (for cases at the undergraduate level) or a graduate student (for cases at the graduate level). All members, including the chair, are voting members.

More information about the procedures for constituting an Academic Integrity Board can be found online at the Office of the Provost website (www.iup.edu/academicintegrity).

Appeals

These appeal procedures apply to cases resolved through formal adjudication. Cases of academic integrity that are resolved through Documented Agreement cannot be appealed.

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 in writing within ten (10) calendar days of receiving the report, for any of the following reasons, detailing the reason(s):

- 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

The provost/designee may deny the appeal or direct the appeal to be heard by an AIB within ten (10) 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.

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. Suspension, expulsion, or rescission of a degree may be recommended by the AIB but can only be implemented by the president/designee.

Multiple Violations

Information about prior violations is not relevant to determining whether a student violated the policy in the current case. The AIB may request information on prior violations only after determining that a violation has occurred. Information on prior violations may be used in determining the appropriate sanction.

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.

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 whether a more severe sanction is appropriate.

The AIB must submit a written report of the decision within ten (10) calendar days of its decision to the provost/designee, absent unusual circumstances, who will forward the decision to the involved parties.

The student may appeal any new sanction to the provost/designee under the appeal guidelines. The provost/designee may direct the appeal to be heard by a second AIB.

Sanctions

The following sanctions may be agreed upon by the student and faculty member/administrator through 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 that requires the student to examine his/her dishonest behavior and that 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. In addition to the above, the following sanctions may be imposed through Formal Adjudication and/or AIB.
 - 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 subsequent 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 IUP program(s). Such involuntary withdrawal might be imposed on either a temporary or permanent basis.
 - d. **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.
 - e. **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. 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/designee.

- f. **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 thesis.

Questions concerning the Academic Integrity Policy and Procedures can be directed to the Office of the Provost. More information about Academic Integrity Procedures can be found online at the Office of the Provost website (www.iup.edu/academicintegrity).

Research Integrity Policy

IUP is committed to the highest ethical standards with regard to scholarship conducted by all members of the university community, including faculty, managers, administrators, staff, and students (both undergraduate and graduate). Therefore, it is imperative that all those engaged in research—including undergraduate students—be aware of and adhere strictly to established policies and procedures designed to respond to any allegations or apparent instances of fraud or misconduct related to research activities.

IUP will deal forthrightly with allegations of misconduct associated with research. The university will conduct an inquiry and, if warranted, an investigation of any possible misconduct by IUP faculty, managers, administrators, staff, and students conducting research. If misconduct is determined to have taken place, appropriate disciplinary action will be taken.

Additional policies are in place to protect research involving human subjects or animals and to ensure compliance with state and federal law.

Students engaged in research can find more information about IUP's research policies, procedures, training, and other resources at www.iup.edu/research/policies.

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 Office of the Registrar. 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 Office of the Registrar, changes and absences must be approved by the instructor's dean. Faculty members are only obligated to offer a makeup 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 makeup 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 makeup 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 makeup 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 makeups.

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. This policy does not include final exams. For more information on final exams, refer to the final exam policy.

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 MyIUP before registration.
4. No night exam can take precedence over a regularly scheduled class.
5. Arrangements for nonpunitive makeup 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 canceled. 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.

IT Acceptable Use Policy

Purpose: This policy addresses the use of information technology resources (IT resources) at Indiana University of Pennsylvania ("the university"). IT resources are intended to support the university's instructional, research, and administrative operations.

Scope: This policy applies to all users of IT resources owned or operated by Indiana University of Pennsylvania. Users include students, faculty, staff, contractors, and guest users of computer network resources, equipment, or connecting resources.

Objective: The objective of this policy is to create a framework to ensure that IT resources are used in an appropriate fashion and support the university's mission and institutional goals.

Policy: Use of the university's IT resources is a privilege and signifies agreement to comply with this policy. Users are expected to act responsibly and follow the university's policies and any applicable laws related to the use of IT resources. This policy provides regulations to ensure IT resources are allocated effectively.

While the university recognizes the role of privacy in an institution of higher learning and will endeavor to honor that ideal, there should be no expectation of privacy of information stored on or sent through university-owned IT resources, except as required by law. For example, the university may be required to provide information stored in IT resources to someone other than the user as a result of court order, investigatory process, or in response to a request authorized under Pennsylvania's Right-to-Know statute (65 P.S. §67.101 et seq.). Information stored by the university may also be viewed by technical staff working to resolve technical issues.

Definitions: For the purposes of the IUP Acceptable Use of IT Resources Policy (AUP), IT resources include the University computer network, all University-owned devices and all University provided software systems regardless of what computer network is being used. This is inclusive of all content transmitted over the University computer network by any device regardless of ownership.

Responsibilities of Users of IT Resources:

- Respect the intellectual property of authors, contributors, and publishers in all media.
- Protect user identification, password information, and the system from unauthorized use.
- Adhere to the terms of software licenses and other contracts. Persons loading software on any university computer must adhere to all licensing requirements for the software. Except where allowed by university site licenses, the copying of university-licensed software for personal use is a violation of this policy.
- Comply with federal, state, and local laws, relevant university personal conduct regulations, and the terms and conditions of applicable collective bargaining agreements. Applicable laws include, but are not limited to, those regulating copyright infringement, copyright fair use, libel, slander, and harassment.
- Become acquainted with laws, licensing, contracts, and university policies and regulations applicable to the appropriate use of IT resources. Users are expected to use good judgment and exercise civility at all times when utilizing IT resources and respect the large, diverse community utilizing these resources in a shared manner.
- Understand the appropriate use of assigned IT resources, including the computer, network address or port, software, and hardware.
- Comply with the university's Use of E-mail as an Official Means of Communication Policy. Electronic mail should never be considered an appropriate tool for confidential communication. Messages can be forwarded or printed, and some users permit others to review their e-mail accounts. Message content can be revealed as part of legal proceedings. Finally, messages are sometimes not successfully delivered due to a technical issue requiring authorized IT personnel to review message content as part of the troubleshooting process.

Prohibited Uses of IT Resources:

- Providing false or misleading information to obtain or use a university computing account or other IT resources
- Unauthorized use of another user's account and attempting to capture or guess passwords of another user
- Attempting to gain or gaining unauthorized access to IT resources or to the files of another user. Attempting to access restricted portions of the network, an operating system, security software, or other administrative applications without authorization by the system owner or administrator
- Interfering with the normal operation, proper functioning, security mechanisms, or integrity of IT resources
- Use of IT resources to transmit abusive, threatening, or harassing material or other communications prohibited by law

- Copyright infringement, including illegal sharing of video, audio, software, or data
- Excessive use that overburdens or degrades the performance of IT resources to the exclusion of other users. This includes activities which unfairly deprive other users of access to IT resources or which impose a burden on the university. Users must be considerate when utilizing IT resources. The university reserves the right to set limits on a user through quotas, time limits, and/or other mechanisms.
- Intentionally or knowingly installing, executing, or providing to another a program or file on any of the IT resources that could result in damage to any file, system, or network. This includes, but is not limited to, computer viruses, trojan horses, worms, spyware, or other malicious programs or files.

Procedures: Violations of this policy will be reported to appropriate levels of administrative oversight, depending on the statutes and policies violated. Suspected violations of federal and state statutes and local ordinances shall be reported to the director of Public Safety (chief of campus police) for official action.

Nonstatutory violations of the Acceptable Use Policy, such as “excessive use,” may be reported to the chief information officer, the associate vice president for Human Resources, the Office of Student Conduct, and/or the director of Public Safety (chief of campus police).

A university employee or student who violates this policy risks a range of sanctions imposed by relevant university disciplinary processes, including denial of access to any or all IT resources. He or she also risks referral for prosecution under applicable local, state, or federal laws.

The University Senate—via the Library and Educational Services Committee—is responsible for recommending the university’s Acceptable Use Policy. Questions regarding the applicability, violation of the policy, or appropriate access to information should be referred to the chief information officer.

Use of IUP E-mail as an Official Means of Communications

Purpose: The purpose of this policy is to define IUP e-mail as an official method of communication for the university.

Scope: This policy applies to all students and employees except those employees who do not normally have access to e-mail.

Objective: The objective of this policy is to define the use of IUP e-mail as an official method of communication and the responsibility of e-mail users to monitor, read, and use their IUP e-mail accounts. As the IUP e-mail system provides a recognized method to authenticate the user, it is suitable to use for official communications.

Policy: Indiana University of Pennsylvania provides e-mail services to all students and employees as an official method of communication. Students and employees (except those employees who do not normally have access to e-mail) have a responsibility to read their IUP e-mail accounts and, if responding to or sending e-mail about IUP business, use their IUP e-mail accounts to do so.

Definitions: *E-mail user* is defined as any student or employee who has been issued an IUP e-mail account. *E-mail account* is an active IUP e-mail (@iup.edu). *E-mail spoofing* is the creation of e-mail messages with a forged sender address.

Responsibilities: Users are expected to check their e-mail accounts regularly and to use their IUP e-mail accounts when responding to or sending e-mail to IUP employees and students about IUP academic and administrative matters.

Procedures: The rationale for this policy is that for faculty members who wish to use IUP e-mail for communication to and from students, there is a policy that states that this is approved. Faculty members can put this policy in their syllabi and other documents. Communicating via the IUP e-mail system facilitates determining the identity of the sender. Users are therefore

not permitted to impersonate other users by modifying e-mail header information for the purpose of deception. All forms of e-mail spoofing are prohibited.

Where applicable, academic and administrative offices should publish e-mail addresses that can be used to receive such e-mail. Faculty members should make students aware of their e-mail address by including it on their syllabi or by other means.

Visiting Student Program Policy

A. Purpose

1. To facilitate undergraduate student enrollment at institutions of Pennsylvania’s State System of Higher Education to take advantage of courses available across the System, without loss of institutional residency, eligibility for honors or athletics, or credits toward graduation at the home institution.

B. Undergraduate Student Standards

1. The student must be matriculated at the home university with a minimum of 12 college-level credits and be in good academic standing.
2. Students may take a maximum of 24 credits via the Visiting Student Policy.
3. The student who presents evidence of good standing at the home university will be allowed to register for courses at other State System universities. The visiting student priority level for registration will be determined by each university.
4. All credits and grades accrued at other System universities shall be accepted in full by the home university and thereafter treated as home university credits, residency, and grades.
 - a. It is the responsibility of the student to work with the student’s advisor at the home institution regarding applicability of credits toward graduation requirements at the home institution consistent with State System procedures.
 - b. It is the responsibility of the student to complete the Visiting Student Notification form and submit to the home institution prior to enrolling in courses at another State System institution.
 - c. Students cannot use the Visiting Student Program to repeat courses. Students cannot use the Visiting Student Program for internship or practica that are required for licensure or certification without the express written permission of their appropriate university officials at the home university and placement availability at the requested institution.
5. The student shall register at, and pay tuition and fees to, the State System university visited. A student wishing to divide a course load between two institutions during the same term shall register and pay appropriate tuition and fees at both universities.
6. The Office of the Chancellor will work with universities to establish and publish procedures to identify visiting students such that financial aid, residency, eligibility for honors, eligibility of athletics, and credits to graduation are assured.

Graduation Requirements

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 Communications, 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 bachelor of science in education. The College of Education and Communications offers an associate of arts degree program.

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 orientation 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. In the beginning of their first semester, students are expected to look up the name of their individual faculty advisor and arrange meetings and remain in touch to discuss progress and courses.

With a typical freshman academic schedule, students progress both in the university-wide 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 Composition I, a Humanities History course, a course from a list of Fine Arts selections, and a Dimensions of Wellness course from those selections. ENGL 101 enhances skills in written expression that are essential to success at the university. A history course builds critical thinking skills and provides a foundation of knowledge for subsequent courses. Whichever fine arts course is chosen encourages appreciative participation in campus cultural life. Courses in the Dimensions of 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 members to integrate class work with campus lectures and arts events. Study skills development courses and tutoring resources are available.

Credits and Cumulative Grade Point Average Requirement

Each student must complete a minimum of 120 credits to graduate, including a minimum of 40 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 40 credits divided among Learning Skills, Knowledge Areas, Liberal Studies Electives, and Global and Multicultural Awareness. 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. See the Liberal Studies website www.iup.edu/liberal for the most current information.

Learning Skills: English Composition: Two Courses 6cr

ENGL 101	Composition I	3
ENGL 202	Composition II (sophomore standing)	3

Learning Skills: Mathematics: 3-4cr

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 122	Calculus II 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

Knowledge Area: Humanities: Three Courses* 9cr

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

History:

HIST 196	Explorations in US History	3
HIST 197	Explorations in European History	3
HIST 198	Explorations in Global History	3

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 100	Introduction to Philosophy	3
PHIL 101	Critical Thinking	3
PHIL 122	Contemporary Moral Issues	3
PHIL 130	Introduction to Biomedical Ethics	3
PHIL 223	Philosophy of Art	3

PHIL 240	Philosophy and the Good Life	3
RLST 100	Introduction to Religion	3
RLST 110	World Religions	3
RLST 250	Understanding the Bible	3
RLST 290	Christianity	3

Knowledge Area: Fine Arts: One Course from List 3cr

ARHI 101	Introduction to Art	3
DANC 102	Introduction to Dance	3
FIAR 101	Introduction to Fine 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
THTR 161	Introduction to Theater: Interpersonal Practices	3

Knowledge Area: Natural Science: One Option 7-8cr

Option I: Two-Semester Laboratory Course Sequence 8cr

Two courses with laboratories (4cr each) from the Natural Science Laboratory course list. These two courses do not have to be taken in sequence.

Option II: One Laboratory plus One Non-laboratory Course 7cr

One course with laboratory (4cr) from the Natural Science Laboratory course list and one course (3cr) from Natural Science Non-laboratory course list.

Natural Science Laboratory Courses:

BIOL 103	Life on Earth	4
BIOL 104	Human Biology: How the Human Body Works	4
BIOL 106	Human Genetics and Health	4
CHEM 101	College Chemistry I	4
CHEM 102	College Chemistry II	4
CHEM 111	General Chemistry I	4
CHEM 112	General Chemistry II	4
CHEM 113	Advanced General Chemistry I	4
CHEM 114	Advanced General Chemistry II	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
GEOS 204	Historical Geology	4
PHYS 111/121	Physics I with lab	4
PHYS 112/122	Physics II with lab	4
PHYS 131/141	Physics I with lab (calculus)	4
PHYS 132/142	Physics II with lab (calculus)	4
PHYS 151/161	Medical Physics with lab	4
SCI 105	Physical Science I	4
SCI 107/117	Chemistry for Everyone with lab	4

Natural Science Non-laboratory Courses:

BIOL 107	Introduction to Forensic Biology	3
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 119	Geology of Energy Resources	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	Human 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 107	Chemistry for Everyone with lab	3
SCI 201	Great Ideas in Science	3

Knowledge Area: 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	Geography: Human Environment Interaction	3
GEOG 102	Geography of US and Canada	3
GEOG 103	Global Cities: Issues in Planning and Development [same as RPGL 103] (1)	3
GEOG 104	World Geography: Global Context (1)	3
JNRL 105	Journalism and the Mass Media	3
PLSC 101	World Politics (1)	3
PLSC 111	Power and Democracy in America	3
PSYC 101	General Psychology	3
RGPL 103	Global Cities: Issues in Planning and Development [same as RPGL 103] (1)	3
SOC 151	Principles of Sociology	3
SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations	3
SOC 231	Contemporary Social Problems	3

(1) Also fulfills requirement for Global and Multicultural Awareness course.

Knowledge Area: Dimensions of Wellness: One Course 3cr

COMM 143	Media Wellness	3
COSC 143	Cyber Wellness	3
ECON 143	Financial Wellness	3
FCSE 143	Financial Wellness	3
FDNT 143	Current Issues in Nutrition and Wellness	3
FIN 143	Financial Wellness	3
KHSS 143	Contemporary Women's Wellness	3
KHSS 143	Physical Well-Being	3
KHSS 143	Wellness through Strength Training	3
NURS 143	Healthy People—Promoting Wellness	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 US Armed Service is transferable as MLSC 101 and 102. MLSC 203 and 204 may be substituted for MLSC 101 and 102.

Liberal Studies Electives: 3-9cr

- 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 (CHIN, FRNC, GRMN, JAPN, and SPAN), which may be used twice.
- Refer to program of study for specific requirements.

See list of Global and Multicultural Awareness courses, some of which may be used as Liberal Studies electives.

Also fulfills LS elective requirement:

ANTH 271	Cultural Area Studies: Africa [same as SOC 271]	3
ANTH 272	Cultural Area Studies: China [same as SOC 272]	3
ANTH 273	Cultural Area Studies: Southeast Asia [same as SOC 273]	3
ANTH 274	Cultural Area Studies: Latin America [same as SOC 274]	3
ANTH 310	Voyages of Discovery	3
ANTH 314	Contemporary Native American Cultures	3
ANTH 350	Anthropology of Gender	3
ANTH 365	Native North American Religions [same as RLST 365]	3
ANTH 370	Latinos and Diasporas [same as LAS 370]	3
ANTH 430	Anthropology of Food	3
ARHI 224	Introduction to Asian Art	3
ARHI 427	Japanese Narrative Art	3
ASIA 200	Introduction to Asian Studies	3
BCOM 342	Intercultural Business Communication	3
CHIN 102	Elementary Chinese I	4
CHIN 201	Intermediate Chinese	4
ECON 350	Comparative Economic Systems	3
ENGL 396	The Literature of Emerging Nations	3
GEOG 231	Economic Geography Eastern Europe	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 and Southeast Asia	3
GEOG 257	Geography of South and Southwest Asia	3
HIST 206	The History of East Asia	3
HIST 207	The History of the Middle East	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 338	The History of Iran	3
HIST 339	Jihad and the Origins of Islamist Movements in the Middle East	3
HIST 433	China 1300-1800: The Late Imperial Age	3
HIST 434	Modern China 1800-present	3
HIST 436	Japan 1500-1850: Early Modern Japan	3
HIST 437	Modern Japan 1850-present	3
JAPN 102	Elementary Japanese II	4
JAPN 201	Intermediate Japanese	4
JRNL 375	World News Coverage	3
LAS 350	The Mayas: Culture, Literature, and Numbers	3
LAS 370	Latinos and Diasporas [same as ANTH 370]	3
LAS 480	Latin American Studies Seminar	3
MUHI 223	Musical Cultures from Around the World	3
PLSC 339	Jihad and the Origins of Islamist Movements in the Middle East	3
PLSC 387	Political Systems: Latin America	3
PLSC 389	International Development Strategies	3
PNAF 131	Introduction to Pan-African Studies	3
RLST 220	Buddhism	3
RLST 311	Eastern Philosophy	3
RLST 329	Philosophy of Religion	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 314	Sociology of Native Americans	3
SOC 337	Society, Globalization, and Risk	3
SPAN 244	Modern Mexico	3

Fulfills Global and Multicultural Awareness requirement only:

COMM 230	Global Media and Communication	3
ECON 338	Poverty in Africa	3
ECON 339	Economic Development I	3
ECON 345	International Trade	3
ECON 346	International Finance	3
GEOG 252	Geography of Latin America	3
PLSC 285	Comparative Government II: Non-Western Political Systems	3
SPAN 344	Spanish-American Cultures from the 19th Century to the Present [taught in Spanish]	3
SPAN 364	Survey of Spanish-American Literature [taught in Spanish]	3
WGS 301	Asian American and Asian Diasporic Women's Literature	3

Certain Study Abroad programs in Global and Multicultural Awareness areas are offered (information is in the respective catalog section; further information is available in the Office of International Education).

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 the first character in the section number (such as MATH 350-W01 History of Mathematics) in the listing of course offerings. For more information, please see the Liberal Studies Courses page.

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. Students who have applied for graduation for May and August are invited to attend the May ceremony and are included in the commencement booklet. Students who have applied for graduation for December and January are invited to attend the December ceremony and are included in that commencement booklet.

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 MyIUP (my.iup.edu). Further information on applying for graduation may be obtained at the dean's associate office of the student's college.

Degrees will not be posted until approval by the dean's associate of the student's college is received in the Office of the Registrar. Diplomas and a complimentary official transcript will then be issued provided all financial obligations have been satisfied.

Pre-approval for Transfer Course Work

Students enrolled at IUP who wish to take course work at another institution (either during the summer or regular semesters) must complete an Application for Pre-approval of Course Work at Another College/University before taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside course work 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 either a narrative evaluation from the faculty member certifying that the work was of "C" level or better or notification on the transcript stating that a "P" grade is equal to a "C" grade or better. No more than 60 credits total may be earned at a junior or community college for application toward an IUP degree unless it is part of an articulated agreement. 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 course work are available online at www.iup.edu/registrar/howto. Click on *Pre-approval for Coursework at Another College or University*. Full directions on the form outline the steps involving the transfer evaluation, student's advisor, and college dean or designee. After completing off-campus course work, students should have the institution at which the work was taken send a final official transcript directly to IUP, Transfer Services, 120 Sutton Hall, 1011 South Drive, IUP, Indiana, PA 15705. Copies of transcripts that are opened or unsealed will not be accepted.

Re-evaluation of Transfer Credit

If a student thinks a course was evaluated incorrectly, a re-evaluation form can be printed by visiting www.iup.edu/creditevaluation. A link on this page will lead to the re-evaluation form.

A re-evaluation form can also be picked up in G26 Sutton Hall. Once the student has the form, it should be filled out, and syllabi for the courses that are under question should be attached to the form. The form, along with the syllabi, can be dropped off in G26 Sutton Hall for review by the Transfer Services coordinator. If syllabi are not provided, the re-evaluation cannot be done.

Program Changes

To ensure 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.

IUP Residency Requirement for Awarding of Degrees

All students receiving their first baccalaureate degree are required to complete 30 of their last 60 credits in courses at IUP. All students receiving their first associate degree are required to complete 15 of their last 30 credits in courses at IUP.

For an IUP major, minor, or undergraduate certificate, students are required to complete at least 50 percent of required credits in courses at IUP or another State System institution. Junior/Senior year Study Abroad semesters or other formal Articulation agreements in which State System students may reverse-transfer credits back to IUP are exceptions to this policy.

For undergraduate active-duty service members, IUP applies a more military-friendly set of residency requirements, and these students should consult the Military and Veterans Resource Center for more information.

IUP courses include all courses listed in the *Undergraduate Catalog* and *Graduate Catalog*.

Non-native Students: English Language Requirements

Non-native students of English who have not been admitted as undergraduate students, either international students or those from the US for whom English is not their first learned language, are required to take an MLW Screening/Placement Test before registration in the first semester attending IUP. The test is administered before registration in both the fall and spring semesters. Results of this test are used to determine for which English course (ENGL 100/MLW, ENGL 101/MLW, ENGL 202/MLW, ENGL 121/MLW) 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-MLW English courses. For further information, contact the chairperson of the 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 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 course work 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 10 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 course work completed more than 10 years before the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.

Academic Affairs Division Areas

Timothy S. Moerland, Provost and Vice President for Academic Affairs

John N. Kilmarx, Associate Vice President for Academic Administration

Michele A. Norwood, Assistant Vice Provost for Undergraduate Student Success

Shari A. Robertson, Provost's Associate

Website: 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 Office of the Provost.

The IUP Libraries

Website: www.iup.edu/library

Luis J. Gonzalez, Dean

Susan Drummond, Chairperson; Barefoot, Bishop, Brown, Clouser, Connell, Heider, Janicki, McDevitt, Pang, Parme, Rahkonen, Wick; and professors emeriti Hooks, LaFranchi, Knupp, Scheeren, Shively, Wolf

The IUP Libraries serve the academic and scholarly needs of students and faculty. Library collections and holdings include 529,360 print volumes, 277,194 electronic books, 274 print periodical subscriptions, and over 80,000 full-text electronic professional journals. The Library subscribes to 359 full-text electronic databases and has a collection of 146,806 micro-forms. The Libraries' supplement its holdings via Interlibrary loan services.

In addition to the main library, the Orendorff Music Library is located in Cogswell Hall at the Indiana campus. There are also Libraries at each of the regional campuses located in Punxsutawney and Northpointe. All Library resources are available remotely and throughout the Libraries.

The Library faculty offer individual and group instruction as well as several credit-bearing courses and Information Literacy.

Cook Honors College

Website: www.iup.edu/honors

Caleb P. Finegan, Director

The Cook Honors College is IUP's university-wide 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 Cook Honors College makes an intentional effort to see that students and faculty members 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 Cook 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 that includes classrooms and program offices as well as student rooms and cocurricular spaces.

Students in any academic major may apply for admission to the Cook 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 Cook Honors College Admissions Board.

Program Requirements

All first-year students (freshman and transfer students) are required to live in Whitmyre Hall 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 25 or older or who are married and/or have children). Application for exemption from this residency requirement should be made in the form of a letter to the Cook Honors College director at the time of application to the program.

Cook Honors College students are required to maintain a cumulative 3.25 GPA. A student who falls below the 3.25 GPA will have one semester of Cook 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 Cook 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 Composition I (ENGL 101), three humanities courses (ENGL 121; HIST 196, 197, or 198; and either RLST 100 or PHIL 120), and one fine arts course (either ARHI/MUHI/THTR 101 or DANC 102). HNRC 202 replaces Liberal Studies requirements for either one non-laboratory science and one social science *or* two non-laboratory sciences *or* two social sciences, depending on the units selected.
- **6 credits:** Additional honors course work/experiential education

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 credits required for Cook Honors College graduation. Students are also encouraged to complete an undergraduate thesis for graduation from the Cook 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.

Students are required to do at least one of the following experiential components: study abroad, internship, honors thesis, or independent study. In the absence of a suitable cocurricular experience, an additional 400-level major course or approved graduate course may be substituted.

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

Military Science

Website: www.iup.edu/rotc

LTC Dennis Faulkner, Chairperson; MAJ Pilch, CPT Abel, CPT Dunlevy, MSG Wilson, SFC Collins, Sudol, Rankin, Bennett

Reserve Officers' Training Corps

The United States Army established a Senior Reserve Officers' Training Corps program at the university in 1950. The ROTC program facilitates leadership education 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 24 professional officer specialties in the US 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

- Comprehensive academic program in military leadership teaches practical skills such as physical fitness, 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 enrolled in the Advanced Course (MLSC 305, 306, 407, 408) receive a cash stipend (\$450-\$500 each month) for 10 months during the academic year.
- 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, 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 US 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 US 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 17 years of age but less than 39 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 10 months of the academic year.

Scholarships

High school seniors are eligible to apply for a national four-year or three-year Advanced Designee Scholarship. The scholarship is awarded while the student is still in high school; the cadet must contract with the ROTC at the start of the freshman year of college. Information and criteria regarding who is eligible and how to apply can be found at www.goarmy.com/rotc.

IUP students can compete for campus-based 3.5-year, 3-year, 2.5-year, or 2-year scholarships, and graduate students can compete for campus-based two-year scholarships. Currently, the campus-based scholarships available are as follows:

1. **Line Scholarship:** Open to all majors, it allows cadets to compete for accession into any Army branch or component.
2. **Nurse Scholarship:** Open only to nursing majors, it allows cadets to compete for Active, Guard, or Reserve components.
3. **STEM Scholarship:** Open to all science, technology, engineering, and mathematics majors, it allows cadets to compete for accession into any Army branch or component.
4. **Dedicated National Guard:** Open to all majors, it dedicates cadets into service in the National Guard. Cadets must enter into the simultaneous membership program.
5. **Dedicated Army Reserve:** Open to all majors, it dedicates cadets into service in the US Army Reserves. Cadets must enter into the simultaneous membership program.
6. **Guaranteed Reserve Forces Duty:** Open to all majors, it allows cadets to compete for either Army Reserve or Army National Guard duty. Cadets must enter into the simultaneous membership program.

All scholarships are competitive and are funding dependent. Once the scholarship is awarded, a military service obligation is incurred.

Program in Military Science

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Required Courses:

MLSC 101	Introduction to Military Science (1)	2cr
MLSC 102	Fundamentals of Military Science (1)	2cr
MLSC 203	Fundamentals of Tactical Operations, Techniques of Leadership, and Weapons Characteristics (2)	2cr
MLSC 204	National Security and Fundamentals of Military Topography (2)	2cr
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.

Minor in Military Leadership

The Military Leadership minor prepares ROTC cadets to execute the duties of a commissioned officer in the United States Army. Includes 12 credits of applied military science focusing on military teamwork, leadership, management, and physical preparedness and 6 credits of foundational material including interpersonal self-awareness and the social construction of difference that are the basis for shared organizational objectives. Advances life-long learning and leader development utilizing the US Army Chief of Staff's Professional Reading List. The minor is only available for students enrolled in the Reserve Officer Training Corps (ROTC) and has been designed to connect the principles of teamwork and military leadership, allowing students to take both the minor in Military Leadership and the minor in Effective Teamwork and Communication.

Minor—Military Leadership

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Required Courses:

6

Foundational:

SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (1)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (2)	3cr

Military Science: (3)		12
MLSC 305	Fundamentals of Leadership and Modern Learning/Teaching Relationship	3cr
MLSC 306	Study of Advance 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

Practical Applications in Military Leadership: 0
 Leadership Laboratory (4) 0cr

- (1) SOC 161 counts toward the Liberal Studies Social Science requirement. SOC 161 and SOC 151 are interchangeable for D/F repeat. SOC 161 is required for the Military Leadership minor.
- (2) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for D/F repeat. THTR 161 is required for the Military Leadership minor.
- (3) Students taking 300- and 400-level MLSC courses must be under contract with the Military Science Department to become a US Army officer.
- (4) The Leadership Laboratory, a 0cr course, provides the practical application of military leadership through scenario based tactics.

Office of International Education

Website: www.iup.edu/international

Michele L. Petrucci, Associate Vice President for International Education and Global Engagement

The Office of International Education (OIE) is a comprehensive international education office and 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 that provides special services for admitted international students, visiting scholars, and international visitors and faculty members. The office is also the main resource and support for education abroad programs and international programming. The office provides the following services:

- extensive orientation program for new international students
- advising on immigration matters
- counseling on cultural and personal matters
- preparation and processing of immigration documents
- predeparture orientation program for education abroad participants
- re-entry program for education abroad participants returning from overseas
- intercultural programming for the campus and Indiana community
- aid to faculty members for international programming and faculty-led education abroad
- organization of international events such as International Education Week and International Unity Day
- management of international programs such as Conversation Partners and International Friendship Program
- management and oversight of IUP's intensive English program, the American Language Institute
- International agreements and partnerships
- International recruiting and marketing

International Exchange and Education Abroad Programs

Website: www.iup.edu/educationabroad

Through the OIE, IUP students may take part in education abroad programs. The office houses an exchange/education abroad resource library. Students seeking information on academic programs offered by educational institutions abroad are welcome to read the materials available in the office and on-line. Qualified students planning to travel or study abroad should go to the OIE to start and complete the process.

More information about study abroad can be obtained in the OIE, 724-357-2295, or at the website listed above.

Argentina, Buenos Aires. Universidad del Salvador. Students can study Spanish language and culture in a university setting while experiencing the life metropolitan Buenos Aires has to offer.

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.

Chile, Valparaiso. Pontificia Universidad Catolica de Valparaiso (PUCV). Study for one semester, an academic year, or for the summer at PUCV. Students can enroll in intensive Spanish language and Chilean culture courses or main curriculum. Languages of instruction are English and Spanish.

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.

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, Essex. Students can attend the University of Essex for one semester and enroll in courses in any of the nearly 50 academic programs offered. Language of instruction is English.

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

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, Helsinki. Students can attend the University of Helsinki for a semester or an academic year. Courses are offered in a variety of majors. Language of instruction is English.

France, Nancy. École Nationale Supérieure d'Art de Nancy (ENSA). Students in their junior or senior year can apply to take courses in fine art at ENSA for a semester or an academic year. Languages of instruction are English and French.

France, Nancy. Institute Commerciale de Nancy (ICN). A prestigious Grande Ecole, the ICN offers business courses taught in English.

France, Nancy/Metz (summer). ICN offers a competitive summer program for business students. Language of instruction is English.

France, Paris. Paris International Business School. Students pursuing a business degree can study for a semester or an academic year. Languages of instruction are English and French.

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 can study at the only technical university in Ghana and one of the best in Africa. Courses in humanities, business administration, social sciences, and sciences are offered. Language of instruction is English.

India, Bangalore (summer). Students in the MBA program may take IUP courses in Bangalore on a short, summer program. For information, contact the Eberly College of Business and Information Technology.

Indonesia, Jakarta. Universitas Multimedia Nusantara (UNM). Students can attend the UNM for one semester and enroll in a variety of courses including Indonesian language and cultural studies. Language of instruction is English.

Indonesia, Singaraja. Ganesha University of Education (UNDIKSHA). Ganesha University of Education offers students a unique study atmosphere for a semester or an academic year. Located on the north coast of Bali, the campus is in close proximity to the beach, eco-tourism attractions, and historic temples. Students can take a variety of courses as well as intensive Indonesian language courses. Language of instruction is English.

Japan, Miyazaki (summer). The University of Miyazaki offers students a summer program exploring Japanese language and culture. Languages of instruction are English and Japanese.

Japan, Nagasaki. Students can attend the University of Nagasaki for a semester or an academic year. They can enroll in Japanese language intensive courses or in courses related to their major. Languages of instruction are English and Japanese.

Japan, Nagoya. Nagoya University of Foreign Studies is a private university where students can study Japanese language and culture at many different levels as well as disciplines in English.

Japan, Nagoya. Students can 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.

Malaysia, Subung Jaya. All students are welcome to attend INTI College, a private university that 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 at Oslo and Akershus University College of Applied Sciences in art, economics, social sciences, education, fine arts, and more. Language of instruction is English.

Norway, Stord. Study for one semester or one year at Western Norway University of Applied Sciences. Students have the opportunity to take courses in English, nursing, technical business, and more.

Poland, Poznan. Students studying chemistry, criminology, English, employment and labor relations, journalism and public relations, 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.

Scotland (various cities). Students may take 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 Music at the University of Ljubljana.

South Korea, Daegu. Study for a summer, 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.

South 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 campus, located outside of Seoul. Students can experience a quieter side of Korea. Languages of instruction are Korean and English.

Spain, Valladolid (spring). 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 20 weeks immersed in Spanish culture and language at the University of Valladolid.

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).

Taiwan, Taichung. Providence University. Students can attend Providence University for a semester or summer program. Intensive Mandarin Chinese language courses, Taiwanese culture, and both undergraduate and graduate business courses are available. Languages of instruction are English and Mandarin Chinese.

Trinidad and Tobago. University of Trinidad and Tobago. As IUP's only partner in the Caribbean, the University of Trinidad and Tobago offers a variety of courses at 10 campuses around the island nation. Language of instruction is English.

Turkey, Ankara. Students may study at the Middle East Technical University, located in the country's capital, in a full range of subjects in English. METU is one of the most elite universities in Turkey.

CEA

IUP students can participate in a range of English-medium programs around the world through CEA. For more information, visit the website www.ceastudyabroad.com and the OIE.

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 more than 100 institutions in 35 different countries (summer and longer exchanges are also possible). Students who do not speak a foreign language still have many sites in which the language of instruction is English. Students who do speak a foreign language have even more options. For more information, visit the website www.isep.org and the OIE.

SAI

Not fluent in Italian but interested in Italian language and culture? Consider studying at one of the English-medium institutions offered through IUP's affiliate agreement with SAI: John Cabot University in Rome; Florence University of Arts in Florence; Apicius Culinary Institute in Florence; NABA (Academy of Arts and Design) or Domus Academy for Fashion in Milan; Center for International Intercultural Exchange, Siena; and Sant'Anna Institute Sorrento Lingue, Sorrento. A wide range of courses are offered. Language of instruction is English.

Semester at Sea (SAS)

This is a multiple-country education abroad program open to students of all majors. The unique SAS shipboard environment travels the world while offering cocurricular activities and academics. For more information, visit the website www.semesteratsea.org.

Faculty-led Programs

Faculty-led programs are designed and taught and led by IUP faculty in an international setting. The courses and locations vary from year to year. Current approved programming can be found on the OIE's website www.iup.edu/educationabroad.

American Language Institute (ALI)—English Language Programs for International Students and Visitors

Website: www.iup.edu/ali

Michele L. Petrucci, Executive Director

Emma K. Archer, Assistant Director

The American Language Institute (ALI) offers intensive English classes for international students and visitors. The ALI provides courses for students from beginner to advanced proficiency in English. Students at the ALI take 24 hours of course work a week, with 14-week semesters in the fall and spring and a seven-week term in the summer. An institutional TOEFL is administered at the conclusion of each semester, and results can be used for admission to IUP. Cocurricular social and cultural programs are offered to all ALI students.

The ALI offers several programs of study to meet the language needs and academic interests of international students:

- The English for Academic Purposes program is for applicants preparing for study at a US college or university, exchange students, and individuals in the community who want to improve their English skills.
- The ALI Provisional program (ALI-P) is for applicants who plan to study at IUP. This program allows students to receive conditional admission to an undergraduate and several graduate programs at IUP while they study at the ALI to reach the required level of English proficiency.
- The ALI Bridge program allows qualified students to take up to two IUP classes while also studying English at the ALI. If students successfully complete nine IUP credits through the Bridge program, the language proficiency test requirement may be waived for undergraduate admission.

The ALI will also work with groups and organizations to create programs that meet their students' schedules and specific language learning needs. Please contact the ALI for more information.

Academic Success Center (ASC@IUP)

Website: www.iup.edu/success

The Academic Success Center at IUP (ASC@IUP) supports the achievement of students as they attain their academic goals. ASC@IUP is an important bridge between Academic Affairs, Student Affairs, and Enrollment Management in support of student success. It serves as a hub through which students can navigate the network of offices and service providers across the university.

Equally important is the support provided to faculty members in their role as academic advisors. ASC@IUP provides resources to faculty, using a variety of avenues, which are important tools for working with students.

Resources for students, faculty, and parents are provided online. The center is coordinated by the Office of the Provost, with outreach to all divisions across the university. The Office of the Student Advocate, Office of New Students Orientation, the Major and Career Exploration Center, and the ASC@IUP Walk-in Tutoring Center are components of ASC@IUP.

Student Advocate (Office of the)

Website: www.iup.edu/success

E-mail: asc-inquiry@iup.edu

Building on a culture of student success and retention, the Office of the Student Advocate provides personal student support, outreach services to at-risk populations, and information/referrals to other campus resources for both students and parents. The Advocate assists currently enrolled students as they navigate university systems; can address concerns about life on campus, academic policies, and will provide referrals as appropriate, with the goal of assisting students to fully engage in the learning process.

The Student Advocate serves as the point-of-contact for any student seeking to withdraw from the university by coordinating the Total University Withdrawal process. The Advocate strives to create a supportive environment and offers high quality services on behalf of the entire student population in collaboration with others across the university.

New Student Orientation (Office of)

Website: www.iup.edu/orientation

E-mail: orientation-testing@iup.edu

IUP provides an orientation program for all new students, including all entering freshman and transfer students. Students are expected to participate in the mandatory orientation program that provides information, resources, and interactions designed to ensure a successful first-year or transfer experience. IUP views student orientation as an opportunity to showcase the academic and student experiences that are important to initial success, satisfaction, and retention within the university. The first year at IUP is critical in regard to academic success. During this time, students must develop academic competency in the college curriculum and adjust to the personal decision-making process college life affords. New Student Orientation is designed to assist with this important college adjustment. Freshman and transfer students are expected to participate fully in the orientation program, including any overnight components and associated activities.

Freshman Spring/Summer Orientation: The orientation, advising, and course registration program occurs during the spring or summer immediately preceding students' matriculation on campus. This overnight, two-day program is designed to assess academic readiness for courses integral to the IUP curriculum and acquaint students with the IUP collegiate experience. A concurrent Parent and Family Member Orientation is also offered.

Transfer Summer Orientation: Transfer orientation serves to acquaint students with prior college experience with IUP resources to support academic and career success. The program provides placement testing for students in selected majors; concluding with advisement and course registration. A concurrent Parent and Family Member Orientation is also offered.

Major and Career Exploration Center (MCEC)

Website: www.iup.edu/exploremajors

E-mail: mcec-explore@iup.edu

The Major and Career Exploration Center is designed to assist all students, regardless of class year, with making informed academic and career decisions. Through the use of various tools and resources, peer advisors assist students through evaluating their options while sharing what IUP has to offer in relation to their interests. Services offered include the FOCUS-2 test, several interest inventories, and a resource library.

Students may also want to consider taking DVST 170 Career Exploration. This class introduces students to the theoretical and practical framework with which to explore careers compatible with overall academic skills, aptitudes, and life goals. Students will examine the world of work, assess their interests and abilities, and make realistic decisions on academic majors and careers.

ASC@IUP Walk-in Tutoring Center

Website: www.iup.edu/success

IUP offers several tutoring services for students, the ASC@IUP Walk-in Tutoring Center provides free peer-to-peer tutoring with no appointment necessary and is located in Stabley Library. Students should refer to the Tutoring Schedule online at the start of each semester for specific tutoring times and locations. Supplemental Instruction (SI) and other discipline-specific tutoring can be found at other locations across campus.

Center for Teaching Excellence

Website: www.iup.edu/teachingexcellence

Stephanie A. Taylor-Davis, 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 members are invited and encouraged to utilize the center resources to enhance student engagement in the learning process.

The Harrisburg Internship Semester (THIS)

The Harrisburg Internship Semester (THIS) is available to an exceptional student from any IUP major each fall and 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 45 or more earned credits at the time of application and a cumulative GPA of at least 3.0. Applicants will submit two letters of recommendation and a sample of their writing skills which must be a copy of an IUP writing assignment that has been graded by an instructor.

Of the 15 credits THIS interns earn, nine credits are for the internship placement experience, three credits for completing an individualized directed project involving substantial research and analysis, and three credits are earned for participation in a rigorous academic seminar. The program is directed by a Pennsylvania State System faculty member selected to direct the program in Harrisburg. This faculty member, the THIS Resident Faculty Director, 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.

Students in THIS are responsible for tuition and fees as in any normal semester. A stipend of \$4,000 is provided to assist with living expenses. The Resident Faculty Director will help students find housing in Harrisburg. Students are responsible for their own transportation between their home and Harrisburg.

An IUP faculty member serves as the THIS Faculty Campus Coordinator and is responsible for the THIS student selection process. Please contact the Provost's Office to get the contact information for the current THIS Faculty Campus Coordinator to learn more about the program and find out about coming deadlines.

The Eberly College of Business and Information Technology

Robert C. Camp, Dean

Kara K. Romance, Assistant Dean for Undergraduate Student Services

Cynthia L. Strittmatter, Assistant Dean for Administration

Prashanth N. Bharadwaj, Dean's Associate

Website: 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, Information Systems and Decision Sciences, and Marketing.

College Majors and Concentrations

- **Accounting**
- **Finance**
- **Human Resource Management**
- **International Business**
- **Management** (Tracks: General Management, Energy Accounting and Finance, Energy Management, Entrepreneurship and Small Business Management, Supply Chain Management, and Professional Land Resource Management)
- **Management Information Systems** (Tracks: Information Systems, Information Technology)
- **Marketing**

Mission Statement

The mission of the Eberly College is to provide students with a broad range of high-value undergraduate and graduate business programs aimed at fostering ethical behavior and entrepreneurial spirit, and developing skills vital to their success in today's world.

The college enrolls a highly diverse student body from Pennsylvania, other 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 Eberly College 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 Eberly College engages in service activities that include opportunities for involvement of both faculty and students with the business community.

Vision Statement

The Eberly College of Business and Information Technology aspires to be a premier business school, recognized worldwide for excellence through applied learning, leadership development, cross-cultural enrichment, scholarship, and service.

Accreditation

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

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 seven bachelor of science degree programs offered in business—Accounting, Finance, Human Resource Management, International Business, Management (General Management, Energy Accounting and Finance, Energy Management, Entrepreneurship and Small Business Management, Supply Chain Management, and Professional Land Resource Management), Management Information Systems (Information Systems, Information Technology), 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 course work 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 to enroll in 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 BS degree in all of the ECOBIT's majors and concentrations by completing the first 75 credits of the IUP BS 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 BS degree in one of the majors offered by the ECOBIT at IUP. Contact the ECOBIT for further details.

Business Minors for ECOBIT Students

The Accounting, Finance, Management, Management Information Systems, and Marketing minors 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.

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.

Pre-law Interdisciplinary Minor

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Seven courses, including at least one from each of the areas (no courses with student's major prefix):

<i>Business:</i>	ACCT 201, ACCT 202, BLAW 235
<i>Criminology:</i>	CRIM 210, 215, 225, 255
<i>Economics:</i>	ECON 121, 122, 332
<i>English:</i>	ENGL 212, 227, 265, 310, 321
<i>History:</i>	HIST 320, 341, 342, 346, 475
<i>Philosophy:</i>	PHIL 101, 122, 130, 221, 270, 320, 450
<i>Political Science:</i>	PLSC 358, 359, 361, 405

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.

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: 15

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: 6

Two of the following courses with advisement:

BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	3cr
IFMG 300	Information Systems: Theory and Practice	3cr
MGMT 330	Production and Operations Management	3cr

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally, or even more important, than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major coursework minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The coursework of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20

Required Courses: 12

COMM 261	Teamwork and Communication Skills for College and Career (1)	3cr
LDSP 361	Introduction to Leadership	3cr

SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (2, 3)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (4)	3cr

Interdisciplinary Teamwork Course: (5) 3-4

One course approved as a Teamwork-Intensive section (T-Course) course. 3-4cr

Capstone Courses: (6) 2-3

TMWK 461	Teamwork and Communication in Research (7)	1cr
	And one to two credits of independent study, honors thesis, or undergraduate research (8)	1-2cr

- (1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.
- (2) SOC 161 counts toward the Liberal Studies Social Science requirement.
- (3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.
- (4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.
- (5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.
- (6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches:
 - 1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or
 - 2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.
- (7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.
- (8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.

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, 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 a varying number of exclusive courses in the freshman through the senior years.

Admission to the honors program will be based on a holistic approach, including SAT scores, secondary school GPA, secondary school class rank, and a 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.

Honors course work is recorded on university transcripts, and students completing the ECOBIT honors program will be recognized at departmental commencement ceremonies.

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/IFMG 101, ECON 121, 122, ENGL 101, 202, MATH 115, 214, PSYC 101, 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 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, BCOM 321, BLAW 235, FIN 310, IFMG 300, MGMT 310, MGMT 330, MKTG 320, and QBUS 215.

Residency Requirement

All of the college's majors must take a minimum of 50 percent of their required business* credits in IUP course work. 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* course work 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" course work consists of all ECOBIT courses except IFMG 101 and QBUS 215. ECON 334 is also treated as a "business" course. "Nonbusiness" course work consists of IFMG 101, QBUS 215, and all non-ECOBIT courses except ECON 334.

The Corporate Relations and Internship Office

IUP offers one of the largest business internships programs in Pennsylvania. Students can choose from a wide range of organizations to gain real-world experience while earning academic credit. Internship advisors are available to counsel students regarding internship prerequisites, procurement of the internship position, and scheduling to maximum benefit.

Office of Academic 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 course work, 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 100 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 all of the 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 for Operations Management
- Association of Management Information Systems
- Finance Association
- Future Entrepreneurs Club
- Graduate Business Student Association
- International Business Association
- Management Association
- Mock Trial Club
- Phi Beta Lambda
- Phi Gamma Nu
- Society for Human Resource Management
- Student Accounting Association
- Student Managed Investment Portfolio
- Student Marketing Association
- Student Operations Management 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 **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 that 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 have a full range of entrepreneurial experiences through delivery of undergraduate and graduate entrepreneurship course work, 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

Sekhar Anantharaman, Chairperson; Anderson, Kline, Maheshwari, Opalinski, Paz, Rahman, Simpkins, 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: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with ACCT prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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: Accounting (4) 27

Required Courses:

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
		9cr

Controlled Electives: Three courses from any ACCT 300 level or above (except for ACCT 493) that are not included in the accounting major core and/or BLAW 336, or with approval of the chairperson

Free Electives: (5, 6) 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.
- (4) Students must meet the grade prerequisite(s) listed in the course description section of this catalog before advancing to the next course.

(5) Students interested in pursuing the following career paths should consider:

- **Certified Public Accountant (CPA):** ACCT 422, 441, 493, and BLAW 336. Students seeking certification as a CPA will be required to satisfy the educational requirement of 150cr.
- **Certified Management Accountant (CMA):** ACCT 412, 432, 461, 493
- **Certified Fraud Examiner (CFE):** ACCT 432, 493, ECON 223, CRIM 101.

(6) Students may be able to apply these credits in conjunction with the controlled electives to earn a minor in another discipline, such as finance, marketing, economics, and pre-law. Students should follow the advice of their faculty advisor to fulfill the above requirements.

Minor—Accounting (1)

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(for business majors and students majoring in computer science, criminology, economics, employment and labor relations, fashion merchandising, hospitality management, and sport administration)

Prescribed Liberal Studies:

Mathematics: MATH 214 or 217

Social Science: ECON 121

Liberal Studies Elective: BTED/COSC/IFMG 101

Courses:

12

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
ACCT 304	Intermediate Accounting I	3cr
ACCT 305	Intermediate Accounting II	3cr

Two courses from the following:

6

ACCT 303, 311, 401, 421/422, 431/432

(1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

Department of Finance and Legal Studies

Website: www.iup.edu/financelegal

Ibrahim Affanch, Chairperson; Boldin, Chaudhry, Eastman, Scudder, Troxell, Webb; and professor emeritus Ray

Finance Major

The Finance program, 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 in the ECOBIT narrative of this catalog.

Bachelor of Science—Finance

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with FIN prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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
FIN 425	Financial Derivatives	3cr

Controlled Electives:

One course from the following: ACCT 305, 421, BLAW 336,

FIN 365 and 366 (4), 420, 424, 481, 493, REAL 382

One course from the following: ECON 325, 334, 345, 356

Free Electives: 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.
- (4) In order for FIN 365 and 366 to count as a controlled elective, you must complete both FIN 365 (1.5cr) and 366 (1.5cr).

Minor—Finance (1, 2)

(for business majors in the ECOBIT only) 18

Required Courses:

FIN 310	Fundamentals of Finance	3cr
FIN 320	Corporate Finance	3cr
FIN 324	Principles of Investments	3cr

Controlled Electives:

Three courses from FIN or REAL at 300 level or higher 9

- (1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.
- (2) Maximum of two REAL courses.

Department of Information Systems and Decision Sciences

Website: www.iup.edu/isds

Dr. Pankaj Chaudhary, Chairperson; Ali, Gu, Hyde, Mensch, 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 involve-

ment 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.

Information Systems Track

The Information Systems Track prepares students for careers in computer-based information systems in organizational environments. Integrates areas such as networking, cybersecurity, and user/manager involvement in the global business environment with the traditional skills of programming, analysis and design, database development, architecture designs, and application development. Project management, Internet of Things (IoT), and client server applications are included, as well as an emphasis on business computing issues such as profitability, budgeting, collaboration, and front end/back end system processing.

Information Technology Track*

The Information Technology (IT) Track of the management information systems (MIS) program provides graduates with the skills and knowledge to take on appropriate professional positions in the IT field upon graduation. It aims also at providing skills for graduates to grow into leadership positions and/or pursue research or graduate studies in the field. The IT field is a vibrant field that emerged as a result of the rapid advances in the technology field and the need for organizations to adjust quickly to these advances. IT Track graduates should be the first to take the lead to fill the computing needs of organizations. The IT Track encompasses courses in the latest technological advances, thus enabling graduating students to take the lead in this vibrant field.

Minors

The department welcomes minors for students who are majoring in other business programs. The Management Information Systems minor offers other business majors a technical enhancement to their area of interest, a necessity for today's business manager.

Bachelor of Science—Management Information Systems/Information Systems Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with IFMG prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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: Information Systems Track 21

Required Courses:

IFMG 210	Introduction to Front-End Business Applications	3cr
IFMG 230	Introduction to Back-End Business Applications	3cr
IFMG 250	Business Systems Technology	3cr
IFMG/COSC 352	LAN Design and Installation	3cr
IFMG 390	Database Theory and Practice	3cr
IFMG 460	Analysis and Logical Design	3cr
IFMG 475	Project Management and Implementation	3cr

Controlled Electives: (4) 6

Two courses from the following:

Software Development: COSC 210, 300, 310, 362, 365, IFMG 330

Networks and Cybersecurity: COSC 316, 345, 356, CRIM 321, 323, IFMG 368, 382

Database and Decision Support: IFMG 455, 456, 465, QBUS 380, 401, 450, 481

Information Technology: IFMG 360, 414, 471

Special Topics and Internships: IFMG 481, 493

Free Electives: 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.
- (4) A student may choose to fulfill the 6cr requirements through one or more internship(s).

Bachelor of Science—Management Information Systems/ Information Technology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with IFMG prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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: Information Technology Track 21

Required Courses:

IFMG 210	Introduction to Front-End Business	
or 230	Applications or Introduction to Back-End Business Applications	3cr
IFMG 250	Business Systems Technology	3cr
IFMG 254	Computer Technology Virtualization	3cr
IFMG/COSC 352	LAN Design and Installation	3cr
IFMG 360	Information Storage and Management	3cr
IFMG 390	Database Theory and Practice	3cr
IFMG 471	Data Center and Cloud Computing	3cr

Controlled Electives: (4) 6

Two courses from the following: IFMG 368, 414, 455, 456, 460, 475, 481, 493, COSC/IFMG 354, COSC 345, 362

Free Electives: 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.
- (4) A student may choose to fulfill the 6cr requirements through one or more internship(s).

Minor—Management Information Systems (1) 18

(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)
IFMG 390	Database Theory and Practice	3cr

Controlled Electives: 6cr

Six credits from any IFMG and/or QBUS courses except IFMG 101, 201, and QBUS 215

- (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.

Department of Management

Website: www.iup.edu/management

Ramesh G. Soni, Chairperson; Ali, Al-Shammari, Bharadwaj, Buchanan, Kosicek, Lipinski, Namkung, Orife, Osborne, Slack, Wilkie, 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 six tracks in which students can concentrate: General Management, Supply Chain Management, Entrepreneurship and Small Business Management, Energy Management, Energy Accounting and Finance, and Professional Land Resource Management.

Management

General Management Track

While both management theory and application are taught in all of the department's majors, this track is distinguished by its emphasis on the achievement of organized goals through the efforts of organization members.

Energy Accounting and Finance Track

Students taking this track will focus on accounting, business law, and finance issues related to the energy industry.

Energy Management Track

This is an interdisciplinary track that offers an introduction to the global energy industry from a number of perspectives, including geography, geoscience, and business.

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.

Supply Chain 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.

Professional Land Resource Management Track.

Students taking this track will focus on economic and law issues related to the energy industry.

Human Resource Management

The bachelor of science degree program 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.

International Business

The bachelor of science degree program 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: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix

College: Business Administration Core 33
Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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:

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 MGMT course	3cr

Controlled Electives: (4)

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. 6cr

Free Electives: 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.
- (4) MGMT 275 will be considered an advanced business elective.

Bachelor of Science—Management/Energy Accounting and Finance Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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 475	Accounting for the Oil and Gas Industry	3cr
BLAW 441	The Law of Property Oil and Gas Leasing I	3cr
BLAW 442	The Law of Property Oil and Gas Leasing II	3cr
ECON 462	Energy Economics	3cr
FIN 401	Energy Finance	3cr
GEOG 316	Introduction to Geographic Information Systems	3cr
GEOG 435	Geography of Energy	3cr
GEOS 201	Foundations of Geology	3cr
MGMT 440	Introduction to Energy Management	3cr

Free Electives: 10-11

Total Degree Requirements: 120

(1) MATH 115 or 121 or 125.

(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.

(3) MATH 214 or 216 or 217.

Bachelor of Science—Management/Energy Management Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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:	24
Required Courses:	
BLAW 441 The Law of Property Oil and Gas Leasing I	3cr
ECON 361 Environmental Economics	3cr
ECON 462 Energy Economics	3cr
FIN 401 Energy Finance	3cr
GEOG 316 Introduction to Geographic Information Systems	3cr
GEOG 435 Geography of Energy	3cr
GEOS 201 Foundations of Geology	3cr
MGMT 440 Introduction to Energy Management	3cr
Controlled Electives:	3
One course from the following: ACCT 475, BLAW 442, ELR 480	3cr
Free Electives:	10-11
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	

Bachelor of Science—Management/Entrepreneurship and Small Business Management Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Mathematics: MATH 115 (1)	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix	
College: Business Administration Core	33
Required Courses:	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BCOM 321 Business and Interpersonal Communications	3cr
BLAW 235 Legal Environment of Business	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:	
MGMT 3xx/4xx or ACCT 311, Advanced MGMT elective or ACCT 311	3cr
MGMT 275 Introduction to Entrepreneurship	3cr (4)
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:	10-11
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	
(4) MGMT 275 will be considered an advanced business elective.	

Bachelor of Science—Management/Supply Chain Management Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Mathematics: MATH 115 (1)	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix	
College: Business Administration Core	33
Required Courses:	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BCOM 321 Business and Interpersonal Communications	3cr
BLAW 235 Legal Environment of Business	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, BCOM 342, IFMG 250, 251, MGMT 311, 400, 401, 481, 493, MGMT/MKTG 350, MGMT/MKTG 432, MKTG 420, 434, QBUS 380, 401, SAFE 101	9cr
Free Electives:	10-11
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	

Bachelor of Science—Management/Professional Land Resource Management Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Mathematics: MATH 115	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: Mathematics: MATH 115 (1)	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix	
College: Business Administration Core	33
Required Courses:	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BCOM 321 Business and Interpersonal Communications	3cr
BLAW 235 Legal Environment of Business	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:	
BLAW 441 The Law of Property Oil and Gas Leasing I	3cr
BLAW 442 The Law of Property Oil and Gas Leasing II	3cr
ECON 361 Environmental Economics	3cr
ECON 462 Energy Economics	3cr
ELR 480 Introduction to Negotiations and Conflict Resolution	3cr
GEOG 316 Introduction to Geographic Information Systems	3cr
GEOG 435 Geography of Energy	3cr
GEOS 201 Foundations of Geology	3cr
MGMT 440 Introduction to Energy Management	3cr
Free Electives:	10-11
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	

Bachelor of Science—Human Resource Management

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Mathematics: MATH 115 (1)	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix	
College: Business Administration Core	33
Required Courses:	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BCOM 321 Business and Interpersonal Communications	3cr
BLAW 235 Legal Environment of Business	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	27
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> 428 Seminar in Management	3cr
MGMT 405 Organizational Staffing	3cr
Controlled Electives: Three courses from the following:	9cr
ACCT 300, BCOM 342, ELR 480, MGMT/MKTG 432, MGMT 311, 406, 434, 451, 452, 493, PSYC 390, 411, SAFE 101, SOC 340, 348, 362	
Free Electives:	10-11
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	

Bachelor of Science—International Business

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Humanities: PHIL 122	
Mathematics: MATH 115 (1)	
Social Science: ECON 121, PSYC 101	
Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix	
College: Business Administration Core	33
Required Courses:	
ACCT 201 Accounting Principles I	3cr
ACCT 202 Accounting Principles II	3cr
BCOM 321 Business and Interpersonal Communications	3cr
BLAW 235 Legal Environment of Business	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 (4)	0-9
Foreign Residency Requirement (5)	
Major: International Business	21
Required Courses:	
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
Human Resources Management Concentration:	
MGMT 300 Human Resource Management	3cr
MGMT 400 Compensation Management	3cr
MGMT 402 Seminar in Human Resource Management	3cr
MGMT 452 Comparative Management	3cr
Marketing Concentration:	
MKTG 321 Consumer Behavior	3cr
MKTG 420 Marketing Management	3cr
MKTG 421 Marketing Research	3cr
MKTG 430 International Marketing	3cr
Free Electives:	7-17
Total Degree Requirements:	120
(1) MATH 115 or 121 or 125.	
(2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.	
(3) MATH 214 or 216 or 217.	
(4) 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.	

(5) 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.

Minor—Management (1) 18
(for business majors in the ECOBIT only)

Required Courses:

MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 300	Human Resource Management	3cr
MGMT 310	Principles of Management	3cr
MGMT 434	Quality Management	3cr
MGMT 451	International Management	3cr
One MGMT 1XX, 2XX, 3XX, or 4XX course		3cr

(1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

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 performing groups, and developing and running nonprofit community theatres. Students will develop the skills necessary to evaluate opportunities within their industry. They will learn 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 essential for 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
ECON 122	Principles of Microeconomics	3cr
FIAR 401	Creativity and Innovation in the Arts	3cr
MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 450	Case Studies in Arts Management	3cr
MKTG 320	Principles of Marketing	3cr

Department of Marketing

Website: www.iup.edu/marketing

Framarz Byramjee, Chairperson; Batra, Bebko, Bhagat, Garg, Krishnan, Sciulli, Sharma; and professor emeritus Weiers

The bachelor of science degree program in marketing 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 21st century.

Bachelor of Science—Marketing

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 115 (1)

Social Science: ECON 121, PSYC 101

Liberal Studies Electives: 9cr, COSC/IFMG 101 or IFMG 110 (2), ECON 122, MATH 214 (3), no courses with MGMT prefix

College: Business Administration Core 33

Required Courses:

ACCT 201	Accounting Principles I	3cr
ACCT 202	Accounting Principles II	3cr
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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 27

Required Courses:

MKTG 321	Consumer Behavior	3cr
MKTG 421	Marketing Research	3cr
MKTG 450	Marketing Strategy	3cr
A minimum of two courses from the following:		
MKTG 430	International Marketing	3cr
MKTG 431	Business-to-Business Marketing	3cr
MKTG 435	Professional Selling and Sales Management	3cr

Major Electives: Select 9-12cr from the following: 9-12cr

MKTG 350, 432, 433, 434, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 481, 482, 493; One (3cr) advanced-level non-MKTG prefix course from allied fields of student's career interest may be substituted for a Marketing elective, with advisor's documented permission.

Free Electives: 10-11

Total Degree Requirements: 120

- (1) MATH 115 or 121 or 125.
- (2) IFMG 110 cannot be used as a D/F repeat for COSC/IFMG 101.
- (3) MATH 214 or 216 or 217.

Minor—Marketing (1) 18

(for business majors and students majoring in fashion merchandising, sports administration, art, journalism and public relations, or hospitality management)

Required Courses:

MKTG 320	Principles of Marketing	3cr
MKTG 321	Consumer Behavior	3cr
Four additional MKTG courses		12cr

(1) Minor course requirements must be completed with a minimum cumulative GPA of 2.0.

The College of Education and Communications

Lara M. Luetkehans, Dean

Lynanne Black, Dean's Associate for Academic Affairs

Sue A. Rieg, Dean's Associate for Educator Preparation

J. Randolph Cromwell, Success Coordinator

Lloyd Onyett, Assistant Dean for Information and Communications Technology

Jeffrey J. Fratangeli, Director of Special Projects

Brian S. Carothers, Instructional Design Specialist

Nancy R. Evans, Instructional Design Specialist

Website: 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 Communications 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 that offer 25 programs leading to bachelor's, master's, and doctoral degrees. Included in the college are Adult and Community Education; Communication Disorders, Special Education, and Disability Services; Communications Media; Counseling; Developmental Studies; Educational and School Psychology; Professional Studies in Education; Student Affairs in Higher Education; and the Center for Career and Technical Personnel Preparation.

The college is well-known for its opportunities to integrate hands-on learning. More than 100 students enjoy early field experiences each semester. In addition, the college places roughly 100 student teachers each year in public schools that 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's 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 Psychological Association (APA)
- 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 of Social Studies
- National Council of Teachers of Mathematics
- National Council of Teachers of English
- National Middle School Association (NMSA)
- Pennsylvania Association of Colleges of Teacher Education (PAC-TE)
- Pennsylvania Department of Education (PDE)
- Society of Health and Physical Educators (SHAPE)
- Teacher Education Council of State Colleges and Universities (TEC-SCU)

Undergraduate Degrees, Majors, Minors, Certificates and Concentrations

- **Bachelor of Arts:** General Studies
- **Bachelor of Science:** Communications Media (Media Marketing, Media Production, or Media Studies Tracks), Disability Services, Speech-Language Pathology and Audiology,
- **Bachelor of Science in Education:** Business Education, Early Childhood Education/Special Education, Early Childhood Education/Master of Education-Literacy, Middle-Level Education 4-8 with Mathematics, Science, Social Studies, or English/Language Arts Specialization, Special Education, Vocational/Technical Education
- **Associate of Arts:** General Studies
- **Minors:** Audiology, Communications Media, Deaf Studies, Educational Psychology, Educational Technology, Special Education
- **Certificates:** Audio Production, Autism, Photography and Digital Imaging, Popular Music Studies, Secondary School Cooperative Education Teacher/Coordinator, Special Education, Vocational-Technical Education
- **Track:** College of Education and Communications Honors
- **K-12 and Secondary Education Programs:** Art Education, Biology 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, Sociology), Spanish Education

Graduate Programs and Certifications

- **Master of Education:** Business Education/Workforce Development, Special Education, Educational Psychology, Elementary and Middle School Mathematics Education, Literacy, Master's in Education, School Counseling
- **Master of Arts:** Adult and Community Education, Community Counseling, Instructional Design and Technology, Student Affairs in Higher Education
- **Master of Science:** Speech-Language Pathology
- **Doctor of Education:** Administration and Leadership Studies and Curriculum and Instruction
- **Doctor of Philosophy:** Communications Media and Instructional Technology, School Psychology
- **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 Catalog*.

Honors Track, College of Education and Communications

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 course work 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 Educational and School Psychology Department chairperson. Students may apply upon acceptance to IUP, or current students may make application following completion of one semester of course work. Applicants must have a minimum 3.25 GPA in total university or high school course work to apply. Students accepted before 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 must 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.

College of Education and Communications 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.

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 majors must submit with their application documentation of their successful completion of the Preservice Academic Performance Assessment (PAPA), Praxis Core, SAT scores/ACT scores, or equivalent as approved by the Pennsylvania Department of Education. Students approved for a change of major will be notified in writing within 14 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 Communications website at www.iup.edu/education.

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 earned credits and a 3.0 cumulative GPA
- Successful completion of the PAPA, Praxis Core, SAT scores/ACT scores, or equivalent with the minimum passing score established by the Pennsylvania Department of Education.
- Completion of the following courses as defined by the major with a grade of "C" or better: ACE 103*, ENGL 101, 121*, EDSP 102, 6 credits in MATH 101 or better* (*See major for specific program requirement)
- Act 24/Act 34/Act 151 clearances and Act 114 federal fingerprinting
- 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 or LiveText and portfolio evaluation
- Advisor's recommendation and signature
- Completion of Act 126 training

IUP education majors are encouraged to take the PAPA as soon as they are prepared for the exams. Extensive review materials and specialized workshops are available. Students who are not successful after five attempts are required to meet with the dean's associate for Educator Preparation 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 or Pennsylvania Educator Certification Tests (PECT). Scores must meet PDE requirements at the time the candidate makes application for teacher certification.
- Act 24/Act 34/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 better
- Updated electronic portfolio review to include CD or LiveText and portfolio evaluation
- Advisor's recommendation and signature
- Current TB test
- Completion of Act 126 training

Step 3. Application for Graduation and Pennsylvania Teacher Certification

Eligibility requirements for graduation:

- Successful completion of Step 2
- Successful completion of student teaching with a grade of "C" or better
- A 3.0 cumulative GPA
- Final approval of electronic portfolio to include evaluation of 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 dean's associate for Educator Preparation. 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 Council, and senior teacher preparation students.

To initiate an appeal, the student must file a form obtained at the Office of Educator Preparation. 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 Educator Preparation program. The committee will review the materials and make its recommendation to the associate dean for Educator Preparation. A final decision rests with the associate dean for Educator Preparation, who is the certification officer.

Federal Higher Education Act Title II

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 on the website www.iup.edu/education.

Student Teaching

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 Communications web pages regularly for the most current information (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 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 Communications, 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*. The handbooks are available for download as part of the Educator Preparation website at 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), Arrest and Conviction Report (Act 24), FBI Fingerprinting Record (Act 114), and evidence of completion of on-line training for Act 126. Candidates for these programs should be aware that some districts or inter-

mediate 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 Educator Preparation office cannot find an acceptable placement will be terminated from the program. Copies of candidate clearances must be on file with the Educator Preparation office before the student's beginning any school or intermediate unit placement.

Field Placements

The Office of Educator Preparation 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.

All official policies and procedures for field experiences are included as part of the Field Experience I and II handbook, available for download as part of the Educator Preparation website at www.iup.edu/teachereducation.

Removal of a Student Teacher from a Student Teaching Placement

The policy for the removal of a student teacher from a student teaching placement can be found at the website www.iup.edu/education.

Certification Requirements

College of Education and Communications 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 the following:

- 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 PAPA, Praxis II, or PECT, 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 portfolio evaluation of teacher work sample

Applications for certification cannot be processed until the student completes the BSEd degree or its equivalent.

Commonwealth Requirements for Teacher Certification

(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 Communications 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 that 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 Communications.

Professional Certification Application Fee

All applicants for teacher certification or professional education certifications from the Commonwealth of Pennsylvania through IUP will be assessed a \$260 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.

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 Media Production and Research** provides IUP students with real-world experiences in preproduction, production, and postproduction of digital media. Its primary technologies are advanced video techniques, such as green screen and digital video recording, but also include related media technologies such as animation, digital photography, video streaming, advanced audio production, and interactive software construction with video, audio, or animation components. The center supports the university and improves the region's quality of life by providing clients with advanced digital media products and by improving the overall climate for technology companies in the region.

The **Labyrinth Center** provides a comprehensive and holistic approach to support IUP students with Autism Spectrum Diagnosis (ASD) as they build relationships, gain independence, experience academic success, and graduate from IUP with the professional and personal skills needed to embark on a fulfilling life and career.

The **Literacy Center**, housed within the Department of Professional Studies in Education, provides opportunities for graduate students in the MED—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. Family literacy services are also available.

The **Center for Creativity and Change** 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 center 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 multitrack 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. IUP-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.

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in

their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally or even more important than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major coursework minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The coursework of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20

Required Courses: 12

COMM 261	Teamwork and Communication Skills for College and Career (1)	3cr
LDSP 361	Introduction to Leadership	3cr
SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (2, 3)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (4)	3cr

Interdisciplinary Teamwork Course: (5) 3-4
One course approved as a Teamwork-Intensive section (T-Course) course. 3-4cr

Capstone Courses: (6) 2-3
TMWK 461 Teamwork and Communication in Research (7) 1cr
And one to two credits of independent study, honors thesis, or undergraduate research (8) 1-2cr

- (1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.
 - (2) SOC 161 counts toward the Liberal Studies Social Science requirement.
 - (3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.
 - (4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.
 - (5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.
 - (6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches:
1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or
2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.
 - (7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.
 - (8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.
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Center for Career and Technical Personnel Preparation—Vocational-Technical Professional Studies

Website: www.iup.edu/careerteched

Karen S. Rivosecchi, Chairperson; Bruce, Catlos, Murdoch

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 people holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based on 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: 46-47

Mathematics: MATH 151

Social Science: PSYC 101

Liberal Studies Electives: 6cr, MATH 152, no courses with VOED prefix

College: 14

Professional Educational Sequence:

ACE 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
FCSE 101, MGMT 275, or VOED 402		
Other Requirements:		24
VOED 450	Technical Preparation of the Vocational Professional	24cr
Free Electives:		4-5
Total Degree Requirements:		120

Certificate—Vocational-Technical Education

Liberal Studies: As follows:	30-32
English: ENGL 101, 202	
Fine Arts: one course from list	
Humanities-Literature: one course from list	
Mathematics: MATH 151	
Natural Science: two courses, lab or non-lab	
Social Science: PSYC 101	
Liberal Studies Electives: 6cr, MATH 152, no course with VOED prefix	
College:	17
Professional Educational Sequence:	
ACE 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
EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDUC 442 School Law	1cr
Major:	25
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 404 Research in Career and Technical Education	3cr
VOED 405 Professional Seminar in Career and Technical Education	3cr
Controlled Electives: (as advised)	3
FCSE 101, MGMT 275, or VOED 402	
Free Electives:	1-3
Total Certification Requirements:	78

Certificate—Secondary School Cooperative Education Teacher/Coordinator (1) 15

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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(1) Student may be exempt from some credit requirements based on proof of previous course work and demonstration of specific competencies.

Department of Adult and Community Education

Website: www.iup.edu/ace

Gary J. Dean, Chairperson; McGinty, Willis; and professor emeritus Ferro

At the undergraduate level, the Department of Adult and Community Education offers the BSEd degree program in business education. At the graduate level, the department offers the MA in Adult and Community Education with the Adult and Community Education (offered fully online), Instructional Design and Technology, and the MEd in Business Education/Workforce Development with the Business, Computer, and Information Technology (with PDE K-12 teaching certification in business, computer, and information technology), Workforce Development, and Administrative (Vocational Education Administration Tracks). In addition, the department offers a Certificate of Recognition in E-Learning. Refer to the *Graduate Catalog* for further details on the graduate programs.

Business Education

IUP's 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 Business Education program is dedicated to preparing teachers who will be qualified and certified to instruct students to live and work in a business environment.

The program 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.

Admission to this program requires entering students to meet the guidelines for admission to the College of Education and Communications. 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.

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: 46-47

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
BCOM 321	Business and Interpersonal Communications	3cr
BLAW 235	Legal Environment of Business	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 401	Web Design	3cr
BTED 470	Technology Applications for Education	3cr
BTST 383	Microcomputer Software Solutions	3cr
MGMT 105	Introduction to Business	3cr

Free Electives: 0-1

(#) Total Degree Requirements: 120

(*) See requirements leading to teacher certification, titled "Admission to Teacher Education," in the College of Education and Communications 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.

Department of Communication Disorders, Special Education, and Disability Services

Website: www.iup.edu/special-ed

Cynthia M. Richburg, Chairperson; Brady, Domaracki, Hill, Kappel, Knickelbein, Lombard, Migyanka, Price, Robertson, Wynkoop; and professors emeriti M. Bahn, W. Bahn, Fiddler, Glor-Scheib, Klein, Morris, Nowell, C. Reber, Shane, Turton, Yost

This department offers the bachelor of science in education degree program with a major in special education. Bachelor of science degree programs with a majors in disability services and in speech-language pathology and audiology are also offered. A bachelor of science in education degree program in with a a major in early childhood education/special education is offered in conjunction with the Department of Professional Studies in Education. Each major follows a prescribed sequence of courses.

The following grade policy applies to two programs of study in the department: Special 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, EDUC 421, 461, and SPLP 122.

The following enrollment policy applies to two undergraduate programs in the department: Special 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.

Early Childhood Education/Special Education

This Early Childhood/Special Education (ECSP) program is designed to assist students in becoming highly qualified, competent, and effective teachers of all learners in grades preK through 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 course work 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 Communications. 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.

The Urban Track, within the ECSP program offered by the departments of Professional Studies in Education and Communication Disorders, Special Education, and Disability Services, prepares students for teaching in urban school districts, especially in low-income communities with high minority enrollments where the need for high-quality teachers is great. Course work and field experiences emphasize the historical, economic, political, and socioeconomic contexts of urban schools and seek to develop within future teachers the skills, knowledge base, and sensitivities for working with students whose backgrounds and life experiences often differ in significant ways from their own.

Bachelor of Science in Education—Early Childhood Education/Special Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43.5

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: SCI 101, 102, 103, 104 (3 of 4 required)

Social Science: GEOG 101, 102, or 104, PSYC 101

Liberal Studies Electives: 3cr, MATH 152

College: 25

Preprofessional Education Sequence:

ACE 103	Digital Instructional Technology <i>or</i>	
<i>or</i> 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 (early childhood)	1cr
EDUC 342	Pre-student Teaching Clinical Experience II (special education)	1cr
EDUC 442	School Law	1cr

EDUC 461	Student Teaching	6cr
EDUC 471	Student Teaching	6cr
Major:		
Required Courses: (1)		
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
EDEX 110	Introduction to Special Needs PreK to Grade 8	3cr
EDEX 269	Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence	3cr
EDEX 278	Identifying and Understanding Children with Significant Adaptive Behavior and Learning Needs from Birth through Adolescence	3cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 424	Strategic Assessment and Instruction in Expository Texts	3cr
EDEX 435	Methods and Curriculum—Severe Cognitive Disabilities	3cr
EDEX 460	Family Perspectives on Disability	3cr
MATH 320	Mathematics for Early Childhood	3cr
MATH 330	Teaching Mathematics in the Elementary School	3cr

Total Degree Requirements: 129.5

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(1) A 3.0 cumulative GPA is required to register in the Teacher Certification Sequence courses.

Bachelor of Science in Education—Early Childhood Education/Special Education Urban Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43.5

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: SCI 101, 102, 103, 104 (3 of 4 required) (1)

Social Science: GEOG 101, 102, or 104, PSYC 101

Liberal Studies Electives: 3cr, MATH 152

College: 23

Preprofessional Education Sequence:

ACE 103	Digital Instructional Technology <i>or</i>	
<i>or</i> 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 342	Pre-student Teaching Clinical Experience II	1cr
EDUC 442	School Law	1cr
EDUC 461	Student Teaching	6cr
EDUC 471	Student Teaching	6cr

Major: 63

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 110	Introduction to Special Needs PreK to Grade 8	3cr
EDEX 269	Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence	3cr
EDEX 278	Identifying and Understanding Children with Significant Adaptive Behavior and Learning Needs from Birth through Adolescence	3cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 424	Strategic Assessment and Instruction in Expository Texts	3cr
EDEX 435	Methods and Curriculum—Severe Cognitive Disabilities	3cr
EDEX 460	Family Perspectives on Disability	3cr
MATH 320	Mathematics for Early Childhood	3cr
MATH 330	Teaching Mathematics in the Elementary School	3cr

Other Requirements: 5

FDED 440	Orientation to Teaching in Urban Centers	2cr
FDED 441	Field Experiences in Urban Centers	3cr

Total Degree Requirements: 134.5

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(1) Students select three of the four sciences.

(2) A 3.0 cumulative GPA is required to register in the Teacher Certification Sequence courses.

Special Education

Bachelor of Science in Education—Special Education

Completion of the sequence of study in this major leads to Pennsylvania Department of Education special education certifications in preK-8 and 7-12. Students will be prepared to teach persons with intellectual disabilities, autism, developmental disabilities, learning disabilities, brain injuries, emotional/behavioral disorders, physical disabilities, and multiple disabilities. Academic course work and field experiences are integrated within the course of study.

Students entering the program should be aware of the following:

1. Students **must** complete a fifth year by applying for early admission into to the MEd—Literacy and or Reading Specialist Certification program.
2. Students must meet all reading specialist certification requirements.
3. **Upon completion** of the reading specialist requirements and passing the Special Education PreK-8 and 7-12 exams and Reading Specialist exam, students can then apply for special education certification.

Bachelor of Science in Education—Special Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 151

Natural Science: Laboratory Science sequence required (SCI 105-107 and SCI 117 recommended)

Social Science: PSYC 101

Liberal Studies Electives: 3cr, MATH 152 required

College: 24

Preprofessional Education Sequence:

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 (Early Education) 1cr

EDUC 342 Pre-student Teaching Clinical Experience II (Special Education-Severe) 1cr

EDUC 421 Student Teaching (Special Education-PreK-8) 6cr

EDUC 441 Student Teaching (Special Education 7-12) 6cr

EDUC 442 School Law 1cr

Major: 55

Required Courses:

EDEX 111 Introduction to Exceptional Persons 3cr

EDEX 114 Atypical Development in Infants, Children, and Adolescents 3cr

EDEX 221 Methods of Teaching Mathematics to Secondary Students with Disabilities 2cr

EDEX 222 Methods of Teaching Language Arts to Secondary Students with Disabilities 2cr

EDEX 223 Reading Methods and Strategies for Students with Disabilities 3cr

EDEX 231 Methods of Teaching Content Area Subjects to Persons with Disabilities 3cr

EDEX 321 Methods of Teaching Language Arts to Persons with Disabilities 3cr

EDEX 323 Instruction of English Language Learners with Special Needs 2cr

EDEX 340 Behavior Management in Special Education 3cr

EDEX 415 Preschool Education for Children with Disabilities 3cr

EDEX 425 Methods and Curriculum (Mild-Moderate Disabilities) 3cr

EDEX 435 Methods and Curriculum—Severe Cognitive Disabilities 3cr

EDEX 440 Ethical and Professional Behavior 1cr

EDEX 458 Transition for Youth with Disabilities 3cr

EDEX 460 Family Perspectives on Disability 3cr

EDEX 469 Education of Persons with Emotional Disabilities/Behavioral Disabilities/Learning Disabilities/Traumatic Brain Injury 3cr

EDEX 478 Education of Persons with Mental Retardation/Developmental Disabilities/Physical Disabilities/Multiple Disabilities 3cr

MATH 330 Teaching Mathematics in the Elementary School 3cr

SPLP 254 Classroom Management of Language Disorders 3cr

Reading Specialist 3

LTCY 600 Foundations of Literary Instruction (1) 3cr

Total Degree Requirements: 123

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(1) This course satisfies 3cr of the reading specialist requirements.

Fifth-Year Courses—Reading Specialist 27

To receive a reading specialist certification, students must complete 27 credits within the master’s program from categories A-C.

A. Literacy

LTCY 600 Foundations of Literacy Instruction 3cr

LTCY 644 Issues and Trends in the Language Arts 3cr

LTCY 701 Assessment and Acceleration 3cr

LTCY 702 Reading and Writing in the Content Areas 3cr

LTCY 705 Organization and Administration of Reading/Writing Programs 3cr

LTCY 770 Practicum and Seminar for Reading Specialist I 3cr

LTCY 771 Practicum and Seminar for Reading Specialist II 3cr

B. Diversity

LTCY 635 Literacy in Inclusive Classrooms 3cr

C. Related Area

LTCY 607 Instruction and Learning with Literature 3cr

Please see the *Graduate Catalog* at www.iup.edu/graduatestudies/catalog and look under Master’s Degree Programs for specific courses.

Minor—Special Education

Completion of the Special Education minor 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 Special Education minor 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

Required Course: 3

EDEX 111 Introduction to Exceptional Persons 3cr

Controlled Electives: Five courses from the following: 15

EDEX 340, 415, 458, 460, 469, 478

Dual Certification—Special Education Grades 7-12 for Secondary Education Majors

Students majoring in a secondary education field may complete academic requirements for certification in special education grades 7-12 by completing the following requirements. Students are advised that completion of requirements for a second certification may take up to three additional semesters.

Dual Certification—Special Education Grades 7-12 for Secondary Education Majors 30

EDEX 111	Introduction to Exceptional Persons	3cr
EDEX 221	Methods of Teaching Mathematics to Secondary Students with Disabilities	2cr
EDEX 222	Methods of Teaching Language Arts to Secondary Students with Disabilities	2cr
EDEX 340	Behavior Management in Special Education	3cr
EDEX 435	Methods and Curriculum—Severe Cognitive Disabilities	3cr
EDEX 440	Ethical and Professional Behavior	1cr
EDEX 458	Transition for Youth with Disabilities	3cr
EDEX 469	Education of Persons with Emotional Disabilities/Behavioral Disabilities/Learning Disabilities/Traumatic Brain Injury	3cr
EDEX 478	Education of Persons with Mental Retardation/Developmental Disabilities/Physical Disabilities/Multiple Disabilities	3cr
EDUC 342	Pre-student Teaching Clinical Experience II (1)	1cr
EDUC 421	Student Teaching (2)	6cr

- (1) EDUC 342 could be taken in summer. Arrangements could be made to use ESY programs such as IUP, PACE, Sunrise School, Milestones, and/or a number of other programs near and far. In fact, a lot of this program could be easily integrated into the candidate's major program.
- (2) A six-week placement under the supervision of a certified special education teacher. Arrangements for this experience will be made among the student-teaching coordinators of the student's major, special education, and the Teacher Education office.

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 PDE Educational Specialist Certification as a School Speech-Language Pathologist are available only to holders of the master's degree in speech-language pathology.
3. Students will need a minimum cumulative GPA greater than 3.5 to qualify for admission to most graduate schools.
4. Upon completion of a master's degree in speech-language pathology at IUP, students will be prepared to provide services in work settings such as hospitals, community clinics, public school and early intervention programs, and rehabilitation settings.
5. To be eligible to register for 300- and 400-level courses in the major, students must meet the junior standing requirement of a minimum overall cumulative GPA of 3.25 and verification by the academic advisor that the program's dispositions are met or exceeded. Students must also complete 25 hours of observation in speech-language pathology or audiology (depending upon career objectives) supervised by an IUP faculty member who holds a Certificate of Clinical Competence. These are completed through enrollment in SPLP 310 and 410.

Transfers, changes of major, and post-baccalaureate admissions into the undergraduate Speech-Language Pathology and Audiology program will be approved on a competitive basis. For a prospective student to be considered for admission on those dates, the minimum criteria include a minimum cumulative GPA of 3.0 or greater in all undergraduate course work, passing standardized exam scores, an interview, and an essay. Please contact the Speech-Language Pathology and Audiology program director for more information.

Bachelor of Science—Speech-Language Pathology and Audiology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: 3cr

Natural Science: BIOL 104 required; any PHYS or CHEM; PHYS 105 or SCI 105 recommended

Social Science: PSYC 101

Liberal Studies Electives: 9cr, PSYC 310, MATH 217, no courses with SPLP prefix

Major: 44

Required Courses:

EDEX 111	Introduction to Exceptional Persons	3cr
SPLP 111	Introduction to Communication Disorders	3cr
SPLP 122	Clinical Phonology	3cr
SPLP 222	Introduction to Audiology	3cr
SPLP 242	Speech Science I: Theory and Measurement	3cr
SPLP 251	Anatomy and Physiology of Speech and Swallowing	3cr
SPLP 275	Language Science	3cr
SPLP 310	Observation in Communication Disorders I (1, 2)	1cr
SPLP 311	Aural Rehabilitation	3cr
SPLP 334	Language Development	3cr
SPLP 342	Neuroscience for Communication Disorders	3cr
SPLP 401	Communication and Social Competence for Children with Autism	3cr
SPLP 406	Clinical Management of Articulation and Language	3cr
SPLP 408	Organic Disorders	3cr
SPLP 410	Observation in Communication Disorders II (2)	1cr
SPLP 412	Organization and Administration of Speech, Language, and Hearing Programs	3cr

Free Electives: 26-27
EDSP 102, SPLP 420 (2), 422

Total Degree Requirements: 120

- (1) Junior standing—attainment of a minimum GPA of 3.25 after the completion of 60cr and verification by the academic advisor that the program's dispositions are met or exceeded—is required to enroll in 300- and 400-level SPLP courses.
- (2) Prior to enrollment in SPLP 310, 410, and 420, students must successfully obtain: Act 34 and Act 151 clearances, Act 24 Arrest or Conviction Report, Act 114 FBI Fingerprinting (continuing enrollment in IUP is required for fingerprinting to remain valid), Title IX mandated reporter training, TB Test (must be renewed annually), speech and hearing screening. For SPLP 420, students must also become a national member of NSSLHA and obtain student clinician professional liability coverage.

Minor—Audiology

The Audiology minor introduces the student to essential information regarding hearing loss, audiological testing, and clinical knowledge of the profession. In addition, information about deaf culture and basic sign language will be provided. This course of study will enable students to have a better understanding of the needs of persons with hearing loss and the deaf, as it relates to speech and language acquisition, genetics, use of appropriate amplification devices, and the structure and function of the hearing mechanism.

The minor is a 24-25 credit program with 18 required and 6-7 elective credits. Required credits include the core courses that are essential to understanding basic and advanced audiological concepts, basic concepts of hearing science and acoustics, implications of processing auditory information, and basic communication needs within the deaf and hard-of-hearing populations. 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 3.0 to enter and complete the minor. Students must also receive a “C” or better in all courses to complete the minor.

This minor is of interest to students in the following majors: speech-language pathology and audiology, special education, education, criminology, nursing, pre-medical fields, psychology, educational psychology, and safety science.

Minor—Audiology 24-25

Required Courses:

EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	3cr
SPLP 222	Introduction to Audiology	3cr
SPLP 311	Aural Rehabilitation	3cr
SPLP 312	Advanced Audiology and Hearing Disorders	3cr
SPLP 422	Central Auditory Processing Disorders in the Educational Setting	3cr

Elective Courses: 6-7 credits from the following:

BIOL 106, EDHL 215, EDSP 376 (1), PHYS 105, SPLP 111

(1) EDSP 376 has a prerequisite of EDSP 102

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 (MH) 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 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. Disability Services majors must achieve and maintain a 2.75 overall GPA.

Bachelor of Science—Disability Services

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: 3cr

Social Science: PSYC 101, SOC 151 or 161

Liberal Studies Elective: 3cr, CDFR 224

Major: 49

Required Courses:

CDFR 218	Child Development	3cr
CDFR 310	Childhood Observation and Assessment	3cr
CDFR 315	Introduction to Early Intervention	3cr
DISB 440	Ethical and Professional Behaviors	1cr
DISB 493	Internship/Field Training	12cr
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
EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	3cr

Other Requirements: 6

Professional Sequence:

EDEX 103	Special Education Technology <i>or</i>	
<i>or</i> ACE 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr

Free Electives: (1) 21-22

Students may use these 18cr toward study of a minor discipline and/or as free electives.

Total Degree Requirements: 120

(1) It is recommended that students pursue minor studies in one of the following: Child Development and Family Relations (18cr), Educational Psychology (15cr), Psychology (18cr), or Sociology/Disability Services or Human Services (18cr).

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 persons who are deaf and hard-of-hearing and to communicate with individuals within the deaf community at a basic level.

The minor is an 18-credit program with 15 required and 3 elective credits. Required credits include the core courses that 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 2.5 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 persons who are deaf or hard-of hearing.

Minor—Deaf Studies 18

Required Courses: 15

EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
EDHL 115	Introduction to American Sign Language	3cr
EDHL 215	Intermediate American Sign Language	3cr
EDHL 308	Language for Deaf and Hard-of-Hearing and English Language Learners	3cr
EDHL 317	Sign Language in Educational Settings	3cr

Controlled Electives: 3 credits from the following: 3

EDEX 111, EDHL 417, SPLP 222

Department of Communications Media

Website: www.iup.edu/commmedia

B. Gail Wilson, Chairperson; Kleinman, Leidman-Golub, Lenze, Mughtar, Ortiz, Piwinsky, Porter, Start, Stiegler, Waltman; and professors emeriti Ausel, Dudt, Kanyarusoke, Kornfeld, Lamberski, Murray

The department offers a Bachelor of Science degree program in Communications Media, with three tracks as well as a minor in Communications Media and a minor in Educational Technology. The Communications Media minor is an 18-credit program designed to complement any major. The Educational Technology minor is a 24-credit program designed for students who are completing a teaching degree.

Students majoring in Communications Media may select one of three tracks: **Media Marketing, Media Production, or Media Studies.**

Media Marketing

The **Media Marketing Track** encourages students to develop skills in media promotion, communication consulting, media sales, and media management. This track includes courses from the Department of Marketing. These required marketing courses introduce students to broader marketing concepts in skill-based marketing courses.

Media Production

Students who seek a more rigorous production experience will find that in the **Media Production Track**. In this track, students will take a set of five COMM production courses that will help them to acquire higher-level production skills. Students will learn the foundational skills associated with their chosen production area and learn to use contemporary postproduction software and equipment. This more specialized track will prepare students for employment in various production fields, including video, audio, radio, graphics, photography and games.

Media Studies

The **Media Studies Track** seeks to broadly educate students in communications media by encouraging them to develop their communication skills, written, oral, and visual. Courses include components to develop critical thinking, collaboration, and research skills. The flexibility of the program allows students to explore a range of courses in media theory, criticism, culture, and current media issues. Beginning level production courses introduce concepts of producing media messages.

With 21 credits of required out of department electives, Communications Media students in the Media Studies and Media Production Tracks are highly encouraged to pursue a minor in another program that complements their degree in Communications Media.

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 candidates for positions in various areas. Students graduating from this program have obtained positions in areas such 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/Media Marketing Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

Mathematics: 3cr

Social Science: PSYC 101

Liberal Studies Electives: 6cr, BTED/COSC/IFMG 101, no courses with COMM prefix

Major: 44

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)	9cr
	Writing-Intensive Course: One writing-intensive COMM course	3cr
Basic Media Production:		
Minimum of two courses from the following: 6cr		
COMM 240	Communications Graphics	3cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 251	Television Production	3cr
COMM 271	Beginning Photography	3cr
COMM 306	2-D Digital Game Development	3cr
COMM 349	Radio Production	3cr

Media Marketing Courses: 12cr

COMM 305	Electronic Media Programming and Sales	3cr
COMM 335	Communications Consulting and Project Management	3cr
COMM 401	Promotion for Radio, Television, and Cable	3cr
COMM 470	Management Practices in Electronic Communications	3cr

Controlled Electives:

Other COMM elective courses 6cr

Marketing Requirements:

MKTG 320	Principles of Marketing	3cr
MKTG 433	Advertising	3cr
MKTG 439	Internet Marketing	3cr
MKTG 445	Social Media Marketing	3cr

Other Requirements:

Additional courses outside Communications Media that augment the student's major course of study (advisor approval) 9

Free Electives: 8-9

Total Degree Requirements: 120

Bachelor of Science—Communications Media/Media Production Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

Mathematics: 3cr

Social Science: PSYC 101

Liberal Studies Electives: 6cr, BTED/COSC/IFMG 101, no courses with COMM prefix

Major: 44

Required Courses: (1)

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)	9cr

Writing-Intensive Course:

One writing-intensive COMM course 3cr

Basic Media Production:

Minimum of two courses from the following: (2) 6cr		
COMM 240	Communications Graphics	3cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 251	Television Production	3cr
COMM 271	Beginning Photography	3cr
COMM 306	2-D Digital Game Development	3cr
COMM 349	Radio Production	3cr

Advanced Media Production:

Minimum of three courses from the following: 9cr		
COMM 340	Advanced Communication Graphics	3cr
COMM 348	Animation	3cr
COMM 350	Advanced Radio Production	3cr
COMM 351	Advanced Video Production	3cr
COMM 360	Digital Sports Production	3cr
COMM 371	Photography II: The Print	3cr
COMM 374	Documentary Photography	3cr
COMM 406	3-D Game and Simulation Design and Development	3cr
COMM 407	Television Feature Production	3cr
COMM 408	Media Field Studies	3cr
COMM 440	Multimedia Production	3cr
COMM 446	3-D 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:	9cr
Other COMM elective courses, NOT including production courses	
Other Requirements:	21
Courses outside Communications Media that augment the student's major course of study (advisor approval)	
Free Electives:	8-9
Total Degree Requirements:	120
(1) At least 12 COMM credits must be 300 level or higher.	
(2) At least 6cr (two courses) in production must be in the same production area.	

Bachelor of Science—Communications Media/Media Studies Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	46-47
Mathematics: 3cr	
Social Science: PSYC 101	
Liberal Studies Electives: 6cr, BTED/COSC/IFMG 101, no courses with COMM prefix	
Major:	44
Required Courses: (1)	
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)	9cr
Writing-Intensive Course:	
One writing-intensive COMM course	3cr
Media Studies: Minimum of four courses from the following:	12cr
COMM 205 Making Presentations with Media	3cr
COMM 230 Global Media and Communication	3cr
COMM 305 Electronic Media Programming and Sales	3cr
COMM 325 Women in Media	3cr
COMM 330 Instructional Design for Training and Development	3cr
COMM 335 Communications Consulting and Project Management	3cr
COMM 345 Television Criticism	3cr
COMM 354 Media Law and Policy	3cr
COMM 375 Mass Media and Behavior	3cr
COMM 380 The History of African Americans in Film	3cr
COMM 401 Promotion for Radio, Television, and Cable	3cr
COMM 414 Music, Media, and Culture	3cr
COMM 420 Media Portrayal of Crime	3cr
COMM 445 Applications and Techniques of Motion Pictures	3cr
COMM 460 Emerging Trends in Communication Technology	3cr
COMM 470 Management Practices in Electronic Communications	3cr
COMM 480 Seminar in Communications Media	3cr
Minimum of two production courses from the following:	6cr
COMM 240 Communications Graphics	3cr
COMM 249 Basic Audio Recording Techniques	3cr
COMM 251 Television Production	3cr
COMM 271 Beginning Photography	3cr
COMM 306 2-D Digital Game Development	3cr
COMM 348 Animation	3cr
COMM 349 Radio Production	3cr
COMM 350 Advanced Radio Production	3cr
COMM 351 Advanced Video Production	3cr
COMM 360 Digital Sports Production	3cr
COMM 371 Photography II: The Print	3cr
COMM 374 Documentary Photography	3cr
COMM 406 3-D Game and Simulation Design and Development	3cr

COMM 407 Television Feature Production	3cr
COMM 408 Media Field Studies	3cr
COMM 440 Multimedia Production	3cr
COMM 446 3-D 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:	6cr

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: 8-9

Total Degree Requirements: 120

(1) At least 12 COMM credits must be 300 level or higher.

Minor—Communications Media 18

Required Courses:	
COMM 101 Communications Media in American Society	3cr
COMM XXX Electives in Communication Media	15cr

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

Certificate in Audio Production

Prepares students for careers producing, recording, mixing, and mastering audio. This 18-credit certificate requires students to take five 3-credit core courses and an additional 3 credits for electives. Completion of this certificate will help prepare students for positions in many fields including, radio, film and television in which knowledge of audio production techniques and technology is required. Majors from other departments will be able to declare a communications media minor along with receiving the certificate.

Certificate—Audio Production 18

Core Courses:	15
COMM 101 Communications Media in American Society	3cr
COMM 249 Basic Audio Recording Techniques	3cr
COMM 349 Radio Production	3cr
COMM 350 Advanced Radio Production	3cr
COMM 449 Advanced Audio Recording Techniques	3cr
Elective:	3
COMM 281 (1), 305, 354, 401, 403, 408, 414, 451 (1), 480 (1), 481 (1)	

(1) As appropriate depending on topic; approval required.

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 in which 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.

Certificate—Photography and Digital Imaging 18

Core Courses:		15
COMM 101	Communications Media in American Society	3cr
COMM 271	Beginning Photography	3cr
COMM 371	Photography II: The Print	3cr
COMM 374	Documentary Photography	3cr
COMM 471	Electronic Imaging	3cr
Electives:		3
COMM 151, 201, 240, 252, 335, 390, 408, 440, 481		

Certificate in Popular Music Studies

Introduces basic skills in the performance, recording, and marketing of popular music. This 19-credit certificate requires students to take 13 credits of core courses and an additional 6 credits of electives. Completion of the certificate will add popular music competencies for students in communications media, music, and other areas. Audition required.

Certificate—Popular Music Studies (1) 19

Core Courses:		13
APMU XXX	Two semesters of Applied Music (1cr each)	2cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 414	Music, Media, and Culture	3cr
MUSC 114	Analysis of Popular Music	3cr
MUSC 140	Popular Music Ensemble (2)	2cr
Electives:		6
Two courses from the following: COMM 354, 449, MUHI 333		

- (1) An audition on an instrument (including voice) or a portfolio of recorded compositions is required for entrance into the program.
 - (2) Two semesters of this 1cr course are required.
-

Department of Counseling

Website: www.iup.edu/counseling

Claire J. Dandeneau, Chairperson; Branthoover, Bruno, Carone, Desmond, Guth, L'Amoreaux, Marshak, McCarthy, Moore, Pollard, West; and professor emeritus Worzby

This graduate department offers two master's degree programs. The 60-credit MA degree program 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 MEd program in school counseling certification is designed to prepare elementary and secondary counselors to qualify for institutional and commonwealth certification. The 60-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 Catalog* for further details.

Department of Developmental Studies

Website: www.iup.edu/devstudies

Melvin A. Jenkins, Chairperson; Ali, Faust, Lawson, Racchini, Wang; and professors emeriti Carranza, Lipsky

The Department of Developmental Studies is committed to helping underprepared 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 precollege experience to all incoming first-year students called CUSP: The Early Entrance Experience. This program starts one week before 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 that develop learning skills to enhance academic success. Courses in developmental mathematics and reading 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.

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.

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 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.

Associate of Arts—General Studies

The associate of arts degree program with a major in general studies is designed to provide the student with a broad base of knowledge in liberal studies with a focused concentration in a field of study at IUP. The program is available in a format of either a traditional classroom or online instruction. The required concentration may include the already approved courses of an established minor program or a set of pre-approved courses to satisfy the 18-credit concentration. No more than 30 credits may be transferred into this degree program from other colleges or universities.

Students who may find this degree appropriate are those whose career goals only require an associate of arts degree, who are distance education students, who need a degree credential in route to a bachelor's degree, or who are unable to complete a bachelor's degree, but seek a degree that can accurately reflect their accomplishments in college.

Associate of Arts—General Studies

Liberal Studies: As outlined in the Liberal Studies section with the following specifications:	39-40
Fine Arts	3cr
Dimensions of Wellness/ROTC	3cr
Humanities	9cr
Learning Skills: ENGL 101 or higher, MATH 101 or higher	6cr
Natural Science	6-7cr
Social Science	6cr (1)
Liberal Studies Electives	6cr
Concentration: Completion of an approved minor or pre-approved set of courses	18
Free Electives:	2-3
Total Degree Requirements:	60

(1) A 3cr course in Global and Multicultural Awareness must be taken.

Bachelor of Arts—General Studies

The bachelor of arts degree program in general studies is designed for adult learners with prior college experience but who lack a four-year degree. Under faculty advisement, the student will develop an individualized plan of study that does not duplicate any existing IUP major. The student's plan of study must be based on a specific theme that incorporates basic, applied, and professional course work within a theoretical framework. At the time of application for degree candidacy or transfer from another institution, a faculty member will be assigned to assist with the plan of study before acceptance.

Bachelor of Arts—General Studies

Liberal Studies: As outlined in Liberal Studies section	43
College Concentration (“Theme”): Complete all requirements for a recognized minor or a concentration approved by an advisor, plus additional courses offered within the same academic college (1). No less than 15 of these credits should be 300-level or above.	30
Special Interest Area (“Cognate Area”): With approval of an advisor, the student will select additional courses that focus on a particular need, interest, or specialty that complements the college concentration.	12
Free Electives:	35
Total Degree Requirements: (2, 3)	120
(1) An advisor may provide pre-approval for course work outside of the college if it's closely related to the concentration. An example may be an HOSP course in an ECOBIT concentration or an IFMG course in a NSM college concentration.	
(2) A minimum of 42 credits of advanced course work is required for graduation in the program.	
(3) Individually planned themes may not duplicate any existing degree programs that are otherwise available at IUP, nor may they be used to circumvent specific requirements within an existing major.	

Department of Educational and School Psychology

Website: www.iup.edu/schoolpsychology

Timothy J. Runge, Chairperson; Barker, Black, Briscoe, Hennessey, Kovalski, McGowan, McLaughlin; and professors emeriti Damiani, Hoellein, Levinson, Rafoth, Rattan, Staszkiwicz, Yanuzzi

The department provides courses to undergraduate and graduate students.

Graduate Programs

Programs leading to the MEd degree in educational psychology as well as a post-master's certification and a PhD in school psychology are described in the *Graduate Catalog*.

College of Education and Communications 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 course work currently in the Educational Psychology minor, which also carries honors courses designation. In addition, students complete an Honors Internship, EDSP 493. Students may complete the Educational Psychology minor while in the Honors Track if desired.

Honors course work 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 and educational psychology minors with a minimum 3.25 GPA in total university course work and a completed application. To apply, students should file an application with the chairperson 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.

Minor in Educational Psychology

Undergraduate students may minor in educational psychology by making application to the advisor of the minor program. Eighteen credits are required for the minor: EDSP 102, 373, 376, 378, 477, and 479.

Minor—Educational Psychology

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Required Courses:

EDSP 102	Educational Psychology	3cr
EDSP 373	Psychology of Adolescent Education	3cr
EDSP 376	Behavior Problems	3cr
EDSP 378	Learning	3cr
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr
EDSP 479	Interpreting and Critiquing Educational Research	3cr

Department of Professional Studies in Education

Website: www.iup.edu/pse

Kelli R. Paquette, Chairperson; Ankrum, Corbett, Doverspike, Fennimore, Johnson, Kerry-Moran, Laverick, Machado, Nicholson, Rieg, Sibert, Mark Twiest, Meghan Twiest, Wissinger; and professors emeriti Bieger, Creany, Elliott, Gerlach, Helterbran, Jalongo, Kaufman, King, Kupetz, McFeely, Mott, Rizzo, Rotigel, Tidwell, E. Vold, L. Vold, Walthour

Early Childhood Education/Special Education

This Early Childhood Education/Special Education (ECSP) program is designed to assist students in becoming highly qualified, competent, and effective teachers of all learners in grades preK through 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 course work 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 Communications. Addition-

ally, 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.

The Urban Track, within the ECSP program offered by the departments of Professional Studies in Education and Communication Disorders, Special Education, and Disability Services, prepares students for teaching in urban school districts, especially in low-income communities with high minority enrollments where the need for high-quality teachers is great. Course work and field experiences emphasize the historical, economic, political, and socioeconomic contexts of urban schools and seek to develop within future teachers the skills, knowledge base, and sensitivities for working with students whose backgrounds and life experiences often differ in significant ways from their own.

Bachelor of Science in Education—Early Childhood Education/Master of Education—Literacy—Reading Specialist

This program, which emphasizes early childhood education and literacy, is designed to assist undergraduate students in becoming highly competent and effective teachers of children in PreK through Grade 4. As undergraduates, students in this program meet the academic requirements for certification in Early Childhood Education and earn a bachelor of science in education degree. Students enrolled in this program have the opportunity to apply for Early Admission to the School of Graduate Studies and Research and begin taking graduate courses that apply toward the MEd—Literacy program.

Upon successful completion of the required graduate course work, candidates become certified as Reading Specialists in PreK through Grade 12 and earn a master of education degree with a major in Literacy. This program prepares students to become professional educators who are well-qualified to utilize appropriate techniques and strategies to expand children’s cognitive, language, social, emotional, and physical development.

During the semester in which they surpass 90 credits, students follow the School of Graduate Studies and Research Early Admission Policy and apply for early admittance to the MEd—Literacy/Reading Specialist program at IUP. A minimum 3.25 GPA is required to apply for early admittance to the graduate program. Once accepted for early admission to this program, students begin taking graduate courses in Literacy to work toward earning Reading Specialist Certification and a master of education degree with a major in Literacy. Acceptance into the graduate program is contingent upon the student maintaining and graduating with a 3.0 minimum GPA.

Students who are accepted for early admission into the MEd—Literacy program take the following courses as undergraduates, as long as they continue to have at least 90 credits and a minimum 3.0 GPA: LTCY 635 Literacy in Inclusive Classrooms (in place of EDEX 323); LTCY 644 Issues and Trends in the Language Arts (in place of ECED 425); and LTCY 701 Assessment and Acceleration (in place of CDFR 310). A minimum 3.0 GPA is required to apply for teacher certification, to take major courses in the department, student teach, graduate with the BSEd degree, and be accepted into the MEd—Literacy program

Middle-Level Education Grades 4-8 Program

The Middle-Level Education program prepares undergraduate students to become highly qualified, effective teachers in upper elementary grades 4-6 and in middle schools in grades 7-8. The content and methods courses in this program focus on the developmental and learning characteristics of students in this age group. Pedagogy courses present research-based strategies for engaging students in mathematics, science, social studies, and language arts content. Each student focuses on one of these content areas for building a solid, content-rich background to become certified as a middle-level educator in grades 4-8. The **English/Language Arts Specialization** 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. The **Social Studies Specialization** prepares preservice teachers to meet the demands of teaching all academic

subjects at the middle level in grades 4-8 with a social studies focus. The **Science Specialization** prepares preservice teachers to meet the demands of teaching all academic subjects at the middle level in grades 4-8 with a science focus. The **Mathematics Specialization** prepares preservice teachers to meet the demands of teaching all academic subjects at the middle level in grades 4-8 with a mathematics focus.

Graduate Programs

Programs leading to the MEd and DEd degrees are described in the *Graduate 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: 43.5

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: SCI 101, 102, 103, 104 (3 of 4 required)

Social Science: GEOG 101, 102, or 104, PSYC 101

Liberal Studies Elective: 3cr, MATH 152

College: 25

Preprofessional Education Sequence:

ACE 103	Digital Instructional Technology <i>or</i>	
<i>or</i> 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 (early childhood)	1cr
EDUC 342	Pre-student Teaching Clinical Experience II (special education)	1cr
EDUC 442	School Law	1cr
EDUC 461	Student Teaching	6cr
EDUC 471	Student Teaching	6cr

Major: 61

Required Courses: (1)

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
EDEX 110	Introduction to Special Needs PreK to Grade 8	3cr
EDEX 269	Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence	3cr
EDEX 278	Identifying and Understanding Children with Significant Adaptive Behavior and Learning Needs from Birth through Adolescence	3cr
EDEX 323	Instruction of English Language Learners with Special Needs	2cr
EDEX 424	Strategic Assessment and Instruction in	

EDEX 435	Expository Texts Methods and Curriculum—Severe Cognitive Disabilities	3cr
EDEX 460	Family Perspectives on Disability	3cr
MATH 320	Mathematics for Early Childhood	3cr
MATH 330	Teaching Mathematics in the Elementary School	3cr

Total Degree Requirements: 129.5

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(1) A 3.0 cumulative GPA is required to register in the Teacher Certification Sequence courses.

Bachelor of Science in Education—Early Childhood Education/Special Education Urban Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43.5

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: SCI 101, 102, 103, 104 (3 of 4 required) (1)

Social Science: GEOG 101, 102, or 104, PSYC 101

Liberal Studies Elective: 3cr, MATH 152

College: 23

Preprofessional Education Sequence:

ACE 103 <i>or</i>	Digital Instructional Technology <i>or</i>	
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 342	Pre-student Teaching Clinical Experience II	1cr
EDUC 442	School Law	1cr
EDUC 461	Student Teaching	6cr
EDUC 471	Student Teaching	6cr

Major: 63

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 110	Introduction to Special Needs PreK to Grade 8	3cr
EDEX 269	Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence	3cr
EDEX 278	Identifying and Understanding Children with	

EDEX 323	Significant Adaptive Behavior and Learning Needs from Birth through Adolescence	3cr
EDEX 424	Instruction of English Language Learners with Special Needs	2cr
EDEX 435	Strategic Assessment and Instruction in Expository Texts	3cr
EDEX 460	Methods and Curriculum—Severe Cognitive Disabilities	3cr
MATH 320	Family Perspectives on Disability	3cr
MATH 330	Mathematics for Early Childhood	3cr
MATH 330	Teaching Mathematics in the Elementary School	3cr

Other Requirements: 5

FDED 440	Orientation to Teaching in Urban Centers	2cr
FDED 441	Field Experiences in Urban Centers	3cr

Total Degree Requirements: 134.5

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(1) Students select three of the four sciences.

(2) A 3.0 cumulative GPA is required to register in the Teacher Certification Sequence courses.

Bachelor of Science in Education—Early Childhood Education/Master of Education—Literacy (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43.5

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: SCI 101, 102, 103, 104 (3 of 4 required)

Social Science: GEOG 101, 102, or 104; PSYC 101

Liberal Studies Elective: 3cr, MATH 152

College: 21-24

Preprofessional Education Sequence:

ACE 103	Digital Instructional 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 441	Student Teaching (1)	9-12cr
EDUC 442	School Law	1cr

Major: 52.5

Required Courses: (2, 3)

CDFR 310	Childhood Observation and Assessment (4, 5)	3cr
ECED 112	Childhood Development Birth–Age 5	3cr
ECED 200	Introduction to Early Childhood Education	3cr
ECED 215	The Developing Child: K-4th Grade	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 425	Methods of Teaching and Assessing Language Arts: Pre-K to Grade 4 Learners (5)	2.5cr
ECED 451	Literacy for the Developing Reader: Grades 2-4 Learners	3cr
ECED 499	Advocacy and Collaboration in Diverse Families and Communities	3cr
ECSP 314	Creative Experiences and Play for All PreK to Grade 4 Learners	3cr
EDEX 111	Introduction to Exceptional Persons	3cr

EDEX 269	Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence	3cr
EDEX 323	Instruction of English Language Learners with Special Needs (5)	2cr
MATH 320	Mathematics for Early Childhood	3cr
MATH 330	Teaching Mathematics in the Elementary School	3cr

Free Electives: 0-3

Total Degree Requirements: 124.5

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

- (1) Students who are seeking a BSEd degree only (e.g., not early admitted to the MED—Literacy program) will take 12cr of student teaching. Students who are admitted early to the MED—Literacy program will take 9cr of student teaching and LTCY 701 for a total of 12cr.
- (2) A 3.0 cumulative GPA is required to apply for teacher certification, register for major courses, and student teach.
- (3) In the semester in which students earn 90+ credits, they may apply to the School of Graduate Studies and Research for Early Admittance to the MED—Literacy/Reading Specialist Program. Students must have a minimum 3.25 GPA to apply. Students must follow the Early Admission to Graduate Program Policy. Students who are accepted will automatically become graduate students at IUP upon degree completion with a minimum 3.0 GPA, and fulfillment of criteria outlined in IUP’s Early Admission to Graduate Program Policy.
- (4) Students must have a grade of “C” or better in PSYC 101 and CDFR 218 or a grade of “C” or better in PSYC 101 and ECED 112 to register for this course.
- (5) Students who are accepted for early admission to the MED—Literacy program take the graduate course outlined in the program’s catalog description rather than the undergraduate course listed.

Bachelor of Science in Education—Middle-Level Program/English/Language Arts Specialization (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Humanities: HIST 196, ENGL 122

Mathematics: MATH 151

Natural Science: BIOL 103 or 104 or 106, SCI 105

Social Science: ECON 101 or 121; GEOG 101, 102, or 104; PLSC 101 or 111

Liberal Studies Elective: 3cr, MATH 152

College: 28

Preprofessional Education Sequence:

ACE 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 440 Professional Seminar: Teachers as Leader and Researcher Grades 4-8 2cr

EDUC 441 Student Teaching (English/language arts setting) 5cr

EDUC 442 School Law 1cr

EDUC 499 Multicultural/Multiethnic Education 2cr

Major: 31

Required Middle-Level Courses:

GEOS 101 The Dynamic Earth (2) 3cr

GEOS 102 The Dynamic Earth Lab 1cr

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 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

English/Language Arts Distribution Requirements: 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 415 English for Teachers 3cr

MIDL 321 21st Century Literacies for Diverse Students 3cr

MIDL 422 Diagnostic and Remedial Reading 3cr

Total Degree Requirements: 123

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

- (1) A 3.0 cumulative GPA is required to register for the Teacher Certification Sequence courses.
- (2) The course meets the PDE requirement of 4cr in geoscience for Middle-Level Education Grades 4-8 certification.

Bachelor of Science in Education—Middle-Level Education 4-8/Mathematics Specialization (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Humanities: HIST 196

Mathematics: MATH 151

Natural Science: BIOL 103 or 104 or 106, SCI 105

Social Science: ECON 101 or 121; GEOG 101, 102, or 104; PLSC 101 or 111

Liberal Studies Elective: 3cr, MATH 152

College: 28

Preprofessional Education Sequence:

ACE 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 421 Student Teaching (non-mathematics setting) 5cr

EDUC 440 Professional Seminar: Teachers as Leader and Researcher Grades 4-8 2cr

EDUC 441 Student Teaching (mathematics setting) 5cr

EDUC 442 School Law 1cr

EDUC 499 Multicultural/Multiethnic Education 2cr

Major:	25	EDUC 442	School Law	1cr
Required Middle-Level Courses: (1)		EDUC 499	Multicultural/Multiethnic Education	2cr
GEOS 101	The Dynamic Earth (2)	3cr		
GEOS 102	The Dynamic Earth Lab	1cr		
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		
Mathematics Distribution Requirements:	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:	121			
(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.				
(1) The course meets the PDE requirement of 4cr in geoscience for Middle-Level Education Grades 4-8 certification.				
(2) A 3.0 cumulative GPA is required to register for the Teacher Certification Sequence courses.				

Bachelor of Science in Education—Middle-Level Education Grades 4-8/Science Specialization (*)

Liberal Studies: As outlined in the Liberal Studies section with the following specifications:	44	
Humanities-History: HIST 196		
Mathematics: MATH 151		
Natural Science: BIOL 103 or 104 or 106, SCI 105		
Social Science: GEOG 101, 102, or 104, ECON 101 or 121, PLSC 101 or 111		
Liberal Studies Elective: 3cr, MATH 152		
College:	28	
Preprofessional Education Sequence:		
ACE 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 421	Student Teaching (non-science setting)	5cr
EDUC 440	Professional Seminar: Teacher as Leader and Researcher Grades 4-8	2cr
EDUC 441	Student Teaching (science setting)	5cr

Major:	31	
Required Middle-Level Courses:		
GEOS 101	The Dynamic Earth	3cr
GEOS 102	The Dynamic Earth Lab	1cr
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 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
Science Distribution Requirements:	18	
BIOL 113, 114, 115, or 119		3cr
CHEM 101	College Chemistry I	4cr
CHEM 102	College Chemistry II	4cr
GEOS 150	Geology of National Parks <i>or</i>	
<i>or</i> 151	The Age of Dinosaurs	3cr
PHYS 151	Medical Physics Lecture	3cr
PHYS 161	Medical Physics Lab	1cr
Total Degree Requirements:	121	
(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.		

Bachelor of Science in Education—Middle-Level Education Grades 4-8/Social Studies Specialization (*)

Liberal Studies: As outlined in the Liberal Studies section with the following specifications:	44	
Humanities-History: HIST 196		
Mathematics: MATH 151		
Natural Science: BIOL 103 or 104 or 106, SCI 105		
Social Science: GEOG 101, 102, or 104, ECON 101 or 121, PLSC 101 or 111		
Liberal Studies Elective: 3cr, MATH 152		
College:	28	
Pre-professional Education Sequence:		
ACE 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 421	Student Teaching (non-social studies setting)	5cr
EDUC 440	Professional Seminar: Teacher as Leader and Researcher Grades 4-8	2cr
EDUC 441	Student Teaching (social studies setting)	5cr
EDUC 442	School Law	1cr
EDUC 499	Multicultural/Multiethnic Education	2cr

Major:		31
Required Middle-Level Courses:		
GEOS 101	The Dynamic Earth	3cr
GEOS 102	The Dynamic Earth Lab	1cr
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 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
Social Studies Distribution Requirements:		18
GEOG 230	Cultural Geography	3cr
HIST 201	Western Civilization before 1600	3cr
HIST 202	Western Civilization after 1600	3cr
HIST 204	United States History to 1877	3cr
HIST 205	United States History since 1877	3cr
SOC 231	Contemporary Social Problems	3cr
Total Degree Requirements:		121

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

Department of Student Affairs in Higher Education

Website: www.iup.edu/sahe

John Wesley Lowery, Chairperson; Benjamin, Mueller; and professors emeriti Hall, 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 residential 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 Catalog* for further details.

The College of Fine Arts

Michael J. Hood, Dean

David A. Ferguson, Assistant Dean for Curriculum and Instruction

Website: 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 Communications. 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, computer laboratories, 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 200 to 300 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. Students in teaching certification programs in art and music also need to be aware of commonwealth and IUP requirements that may be found through the College of Education and Communications.

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 course work and programs of an equally high standard in service to majors in other departments that may require arts classes and, as part of the university's general studies mandate, to the entire university student body.

The college 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)—BA
- **Art Education**—BSEd
- **Art Studio**—BFA
- **Interdisciplinary Fine Arts** (Dance Arts Track available)—BA
- **Music**—BA
- **Music Education**—BSEd
- **Music Performance**—BFA
- **Theater** (Musical Theater Track available)—BA

College Minors

- **Art History**
- **Art Studio**
- **Dance**
- **Effective Teamwork and Communication**
- **Entrepreneurship for the Arts**
- **Music**
- **Theater**

Major in Interdisciplinary Fine Arts

The interdisciplinary fine arts major is available for students desiring to combine course work 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" that are tailored to the area of 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 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.

Dance Arts Track

The Interdisciplinary Fine Arts/Dance Arts Track focuses on the art of dance with a primary integration of dance with a secondary focus on theater, music, art, and/or specified related studies. Students can be admitted to this track after completion of a dance audition and interview. This track is designed to give each major, through advising, customized education in preparation for one of the many focuses within the dance discipline.

Bachelor of Arts—Interdisciplinary Fine Arts/Dance Arts Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-51

Fine Arts: MUHI 101

Liberal Studies Electives: 9cr, no courses with FIAR prefix

Major: (1) 42

Required Courses:

Dance:

DANC 102	Introduction to Dance	9cr
DANC 351	Choreography	3cr
DANC 355	Dance Production: Administration to Creation	3cr
Dance Technique: (1)		21cr
DANC 150	Fundamentals of Dance	3cr
DANC 250	Beginning Modern Dance <i>or</i>	3cr
<i>or</i> 485	Dance Studio: Modern	
DANC 260	Beginning Jazz Dance <i>or</i>	3cr
<i>or</i> 485	Dance Studio: Jazz	
DANC 270	Beginning Ballroom and Tap Dance <i>or</i>	3cr
<i>or</i> 485	Dance Studio: Ballroom and Tap	
DANC 280	Beginning Ballet <i>or</i>	3cr
<i>or</i> 485	Dance Studio: Ballet	
DANC 290	Ethnic Dance	3cr
THTR 486	Practicum in Production (2)	3cr

Theater: One 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:

THTR 486	Practicum in Production: Senior Project	2-3cr
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Controlled Electives: (as advised) 6-7cr

ART 112, 113, 215, DANC 353, 485 Modern, 485 Ballet, 485 Ballroom and Tap, 485 Jazz, 486, FSMR 456, KHSS 175, 221, MUSC 110, 115, 126, THTR 116, 122, 221, 223, 321, 322, 486 (1-3cr)

Free Electives: 27-29

Total Degree Requirements: 120

- (1) Placement for technique level requirements will be determined by the Dance faculty based on student's previous training and/or current technique level (DANC 250, 260, 270, 280, 290, and the corresponding 486 studio level courses).
- (2) Students are required to have 3cr of practicum for dance performance assignments and a 2-3 cr senior project assignment. Students may select to take additional practicum assignments within their advised electives.

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally or even more important than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major course work minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The course work of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20

Required Courses:

COMM 261	Teamwork and Communication Skills for College and Career (1)	3cr
LDSP 361	Introduction to Leadership	3cr
SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (2, 3)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (4)	3cr

Interdisciplinary Teamwork Course: (5) 3-4

One course approved as a Teamwork-Intensive section (T-Course) course. 3-4cr

Capstone Courses: (6) 2-3

TMWK 461 Teamwork and Communication in Research (7) 1cr
And one to two credits of independent study, honors thesis, or undergraduate research (8) 1-2cr

- (1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.
- (2) SOC 161 counts toward the Liberal Studies Social Science requirement.
- (3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.
- (4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.

- (5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.
- (6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches:
 - 1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or
 - 2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.
- (7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.
- (8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.

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 performing groups, and developing and running nonprofit community theatres. Students will develop the skills necessary to evaluate opportunities within their industry. They will learn 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 essential for 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
ECON 122	Principles of Microeconomics	3cr
FIAR 401	Creativity and Innovation in the Arts	3cr
MGMT 275	Introduction to Entrepreneurship	3cr
MGMT 450	Case Studies in Arts Management	3cr
MKTG 320	Principles of Marketing	3cr

Department of Art

Website: www.iup.edu/art

Nathan Heuer, Chairperson; Derry, DiMauro, Fortushniak, Gillham, Harrington, Kabala, Massey, McClure Sweeny, Mitchell, Palmisano, Sweeny, Turner; and professors emeriti Ali, Battaglini, Ben-Zvi, Burwell, Clay, De-Furio, Dropcho, Hamilton, Hedman, LaRoche, Mambo, Matsubara, Nestor, 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. Degree programs offered are the bachelor of fine arts degree program in studio, bachelor of arts degree program in art/studio, bachelor of arts degree program in art/history, and bachelor of science in education degree program 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.

The bachelor of fine arts degree program in studio prepares students for careers as professional visual artists, graphic designers, and creative practitioners and is a platform from which to go on to study for the master of arts and the master of fine arts degrees. The BFA degree program offers two tracks: Graphic Design and Art Studio. Students pursuing the Graphic Design Track will study a broad range of topics including web design, publication design, interactive design, animation, and corporate identity. Faculty mentors assist Graphic Design Track students with the development of a professional portfolio. Students pursuing the Art Studio Track will elect a concentration in one of the department's studio areas including drawing, painting, ceramics, fibers, jewelry and metals, sculpture, and wood.

The BFA degree enables students to pursue substantial instruction in their area of concentration. The BFA major must successfully complete the BFA Sophomore Review where studio faculty members assess student progress within the program. During the final semester of their studies, BFA students publicly present their art in a culminating bachelor of fine arts exhibition.

The bachelor of arts degree program in art studio offers students a broad range of advanced studio options. This degree option should be chosen by the student who seeks a generalized art studio program and provides opportunities for achieving double majors and minors in and outside the Department of Art. The BA major must successfully complete the Sophomore Review where studio faculty members assess student progress within the program.

The mission of the bachelor of arts degree program in art/history is to provide 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 program 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 course work. Art education majors must achieve and maintain a 3.0 cumulative GPA. Students enrolled in the Bachelor of Fine Arts—Studio program must achieve a 2.5 cumulative GPA and earn a grade of “C” or better in all ART and ARHI courses to graduate.

The Art Studio minor 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 Art Studio minor 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 contact the department office at 724-357-2530 or by e-mail through the website www.iup.edu/art.

Bachelor of Arts—Art/History Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

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 nine courses from the following: 27
Up to 6cr (two courses) of Art Studio, prefix ART
ARHI 100, 222, 300, 321, 407, 408, 409, 410, 411, 412, 416, 417, 418, 423, 424, 425, 493

Foreign Language Required: 0-12
Foreign Language Intermediate Level (1)

Free Electives: 16-29

Total Degree Requirements: 120

(1) Intermediate-level foreign language may be included in Liberal Studies electives.

Bachelor of Arts—Art/Studio

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Fine Arts: ARHI 205

Mathematics: 3cr

Liberal Studies Elective: 3cr, ARHI 207, no courses with ART prefix

Major: 12

Foundation Required:

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

Beginning Studio Electives: Four of the following nine courses: 12
ART 211, 213, 214, 215, 216, 217, 218, 219, 281
(ART 281 may be used only once)

Art History Required: 6

ARHI 100	Arts of the 20th Century	3cr
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Controlled ARHI Elective: One course from any 300-400 level ARHI prefix 3cr

Intermediate/Advanced Studio Required: 12

Select 300-400 level courses from four different studio areas (1, 2)

ART 313	Intermediate Ceramics: Wheel Throwing	3cr
ART 316	Intermediate Jewelry and Metals	3cr
ART 352	Intermediate Ceramics: Mold Making	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: 34-35

(#) 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 before enrollment. Students must complete the Sophomore Review.
 (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Fine Arts—Art Studio

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Fine Arts: ARHI 205

Mathematics: 3cr

Liberal Studies Elective: 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

Beginning Studio Electives: Five of the following nine courses: 15
 ART 211, 213, 214, 215, 216, 217, 218, 219, 281
 (ART 281 may be used only once)

Art History Required: 6

ARHI 100	Arts of the 20th Century	3cr
Controlled ARHI Elective: One course from any 300-400 level ARHI prefix 3cr		

Intermediate/Advanced Studio Required: 27
 (Select one of two tracks.)

Art Studio Track:

Studio areas of study include ceramics, painting, woodworking, drawing, fibers, sculpture, print media, jewelry and metals, and internship. Select from ART 313, 316, 352, 421, 451, 452, 453, 454, 457, 459, 460, 481, 493

Graphic Design Track:

Studio area of study includes graphic design and internship. Select from ART 355, 356, 455, 456, 481, 493

Primary Studio Emphasis: Select any 300-400 level courses from one studio area listed in track options above. (2, 3) 18cr

Synthesis Studio: Art Studio Track majors select 300-400 level courses listed within track options above that are outside students' primary studio area. These studio courses must relate to one's primary studio area emphasis conceptually and/or technically. Graphic Design Track majors may select 300-400 level graphic design courses or 300-400 level courses from the Art Studio Track if they relate conceptually and/or technically. (2, 3, 4) 9cr

Intermediate/Advanced Studio Electives: 9
 Select any 300-400 level art studio courses. (1, 2)

Senior Thesis and Professional Practicum: 3
 ART 400 Professional Practices 3cr

Free Electives: 4-5

(#) Total Degree Requirements: 120

- (1) Student must achieve a cumulative 2.5 GPA and earn a "C" or better in all ART and ARHI courses to graduate.
 - (2) 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.
 - (3) 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 before enrollment.
 - (4) Synthesis studio courses must be approved by academic advisor.
- (#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Bachelor of Science in Education—Art Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Fine Arts: fulfilled by ARHI 205

Mathematics: 3cr

Natural Science: Option II

Social Science: PSYC 101

Liberal Studies Elective: 3cr, ARHI 207

College: 28

Professional Education Sequence:

An additional 3cr of MATH 101 or above		3cr
ACE 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr
EDEX 323	Instruction of English Language Learners with Special Needs	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: 21

ART 112	Fundamentals of Drawing	3cr
ART 113	Three-Dimensional Design	3cr
ART 114	Color and Two-Dimensional Design	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

Controlled Electives: 33

15 credits from the following: ARHI 100, ART 111, 211, 213, 214, 215, 216, 217, 218, 219.		15cr
15 credits from any ARHI or ART prefix.		15cr
3 credits from any ARED prefix.		3cr

(#) Total Degree Requirements: 125

(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

Minor—Art History 18

Required Courses: 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

Three courses from the following: 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 (1)	3cr
ART 217	Print Media	3cr
ART 218	Graphic Design (1)	3cr

ART 219	Fibers	3cr
ART 281	Special Topics	3cr
Three courses from the following:		
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 course of study with minor advisor. The instructor may choose to waive the prerequisite for art studio minors.

Department of Music

Website: www.iup.edu/music

Stephanie B. Caulder, Chairperson; Baumer, Baunoch, Beeken, Clewell, Collins, Denison, Dickinson, Eisensmith, Engelstad, Ferguson, Horner, Jennings, Kauffman, Kingan, Levey, Lo, Logan-Hastings, Lucas, Martynuik, Paul, Wacker, Wong Doe, Worzby; and professors emeriti Adams, Becker, Bird, Borst, Casavant, Fry, Kuehn, Lloyd, Mantel, Olmstead, Perkins, Perlongo, Radell, Scandrett, Stamp, Jr., Staples, Thorell, Vansteenkist, Weber, Young

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 fine arts degree with a major in music performance (equivalent to the bachelor of music degree) is a special program that emphasizes the application of musical knowledge and skill. The student in this program prepares to pursue a career as a professional performing musician or composer.

The bachelor of science in education degree program in music leads to certification to teach in the schools of Pennsylvania.

Special Requirements for All Music Majors

- 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. Students who matriculate with keyboard skills beyond those covered in class piano must substitute, at the discretion of the keyboard area, APMU 101 Applied Piano I and/or APMU 151 Applied Piano II for a total of 2cr.
- Each semester, students must participate in at least one large ensemble on their primary instrument. They must also participate in at least one small ensemble each semester, to be selected by their advisor. The large ensembles include MUSC 122 University Chorale, MUSC 123 Symphony Band, MUSC 124 Concert Band, MUSC 125 Marching Band, MUSC 129 University Symphony Orchestra, MUSC 131 University Wind Ensemble, MUSC 132 Men's or Women's Chorus, and MUSC 134 University Chorus. For pianists, guitarists, and other students whose primary instrument does not regularly feature in large ensembles, the department chair will assign suitable alternatives. Students may satisfy

- the ensemble requirement by enrolling in either 1cr or 0cr ensembles so long as they accrue the total number of ensemble credits required by their degree program.
- Students must register for MUSC 475 Music Lab and attend four departmental meetings and eight campus performances each semester, as required by their degree program (seven semesters for the BSEd program and eight semesters for the BA and BFA programs). Campus performances may include recitals, concerts, art exhibitions, theater productions, and so on.
 - In addition to a successful audition for entrance into the Department of Music, prospective students are required to complete a diagnostic music theory exam. Those who score below 70 percent on the exam must take MUSC 113 Theory I Practicum concurrently with MUSC 115. Students may attempt the diagnostic exam twice.

Bachelor of Arts—Music

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46

Fine Arts: MUHI 102

Humanities Literature: One course from 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 Elective: 3cr, MUHI 301, no courses with MUSC prefix

Major: 39

Required Courses:

APMU (Primary) Applied Music I-VI (2cr each)	12cr
APMU 427 Capstone Jury: Primary Instrument	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 153 Class Piano I	1cr
MUSC 154 Class Piano II	1cr
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 475 Music Lab (8 semesters of recital attendance)	0cr

Controlled Electives: 3

APMU 126; MUSC 217 (required for piano and organ majors only), 351, 353, 354 (required for voice majors only); MUSC 120-140 (4 semesters of music ensembles, 0-3cr)

Free Electives: (1) 32

Total Degree Requirements: 120

(1) Students are encouraged to consider a minor in another department.

Bachelor of Fine Arts—Music Performance

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43

Fine Arts: MUHI 102

Humanities Literature: Fulfilled by MUHI 102

Mathematics: MATH 101 or other 3cr Liberal Studies Mathematics

Natural Science: Option II recommended, PHYS 105 recommended

Social Science: PSYC 101

Liberal Studies Electives: 6cr, MUHI 301, 302, no courses with MUSC prefix

Major: 54-56

Required Courses:

APMU (Primary) Applied Music I-VIII (4cr each) (1)	30-32cr
APMU 427 Capstone Jury: Primary Instrument	0cr

MUSC 111	Theory Skills I	2cr	MUSC 120-140	7 semesters of music ensembles (0-1cr each)	0-1cr
MUSC 112	Theory Skills II	2cr	MUSC 211	Theory Skills III	2cr
MUSC 115	Theory I	3cr	MUSC 212	Theory Skills IV	2cr
MUSC 116	Theory II	3cr	MUSC 215	Theory III	3cr
MUSC 180	Technology for General Musicianship	2cr	MUSC 216	Theory IV	3cr
MUSC 211	Theory Skills III	2cr	MUSC 311	Fundamentals of Conducting	2cr
MUSC 212	Theory Skills IV	2cr	MUSC 312	Choral Conducting <i>or</i>	2cr
MUSC 215	Theory III	3cr	<i>or</i> 313	Instrumental Conducting	
MUSC 216	Theory IV	3cr	MUSC 475	Music Lab (7 semesters of recital attendance)	0cr
MUSC 311	Fundamentals of Conducting	2cr	Concentration Area Courses: (select one concentration)		
MUSC 475	Music Lab (8 semesters of recital attendance)	0cr	Voice Concentration		

Controlled Electives (all concentrations): 21-23
MUSC 120-140 Music Ensembles (2) 8cr
Electives with APMU, MUSC (but not 120-140), or MUHI prefix 0-11cr

Controlled Electives (keyboard majors): MUSC 217, 405

Controlled Electives (voice majors): APMU 126; MUSC 153, 154, 351, 353, 354, 406; foreign language course at 100-level or above (critical languages excluded)

Controlled Electives (string majors): APMU 126, MUSC 153, 154, 403, 404

Controlled Electives (wind and percussion majors):
APMU 126, 480, MUSC 153, 154

Controlled Electives (composition majors): MUSC 217, 315, 417

Total Degree Requirements: 120

- (1) Voice, 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). Composition majors will take up to 16cr of composition lessons.
- (2) Students are required to participate in ensembles for five hours a week each semester for eight semesters.

Bachelor of Science in Education—Music Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43

Fine Arts: fulfilled by courses in the major

Humanities: MUHI 102

Mathematics: 3cr, MATH 101, 105, 110, or 217

Natural Science: Option II

Social Science: PSYC 101

Liberal Studies Electives: 6cr, MUHI 301, 302

College: 32

Professional Education Sequence:

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
One additional course from MATH 101, 105, 110, or 217		3cr

Major: 53

Required Courses:

APMU (Primary) Applied Music I-VII	14cr
APMU 427	Capstone Jury: Primary Instrument 0cr
MUSC 111	Theory Skills I 2cr
MUSC 112	Theory Skills II 2cr
MUSC 115	Theory I 3cr
MUSC 116	Theory II 3cr

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 312	Choral Conducting <i>or</i> 2cr
<i>or</i> 313	Instrumental Conducting
MUSC 475	Music Lab (7 semesters of recital attendance) 0cr

Concentration Area Courses: (select one concentration)

Voice Concentration

APMU 101, 151, 201, and 251	Applied Piano I-IV (1cr each)	4cr
APMU 127	Piano Proficiency Level II	0cr
MUSC 351	Italian Diction and Literature	1cr
MUSC 353	French Diction and Literature	1cr
MUSC 354	German Diction and Literature	1cr
Select two of the following class instrument courses:		
MUSC 155	Class Strings I	2cr
MUSC 157	Class Percussion I	
MUSC 159	Class Brass I	
MUSC 161	Class Woodwinds I	

Instrumental Concentration

APMU 126	Piano Proficiency Level I	0cr
MUSC 121, 122, <i>or</i> 134	Choral Ensemble	1cr
MUSC 151	Class Voice I	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 courses with MUSC, MUHI, or APMU prefixes to earn a total of 53cr in major.

Total Degree Requirements: 128

(*) Also see requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.

Minor—Music (1) 18

Required Courses: 15-18

Applied Music (APMU ____) (2)	2cr
MUSC 115	Theory I 3cr
MUSC 111	Theory Skills I <i>or</i> 2cr
<i>or</i> 116	Theory II 3cr
2-4 semesters of the following: MUSC 120-136 (1cr each)	
6cr of MUHI or MUSC 300 or above 6cr	

Electives: 0-3

Course with MUSC, MUHI or APMU (by permission only) prefix, **except** ensembles (MUSC 120-138) and courses in the music education sequence (MUSC 157, 159, 161, 219, 240, 331, 333, 335, 337)

- (1) Students must audition to be admitted into the minor.
- (2) Admitted minor will receive one semester of 2cr applied lessons and may (when possible) receive further semester depending on instructor availability. Students must be enrolled in an ensemble (as advised) during any semester in which they receive applied lessons.

Certificate in Popular Music Studies

Introduces basic skills in the performance, recording, and marketing of popular music. This 19-credit certificate requires students to take 13 credits of core courses and an additional 6 credits of electives. Completion of the

certificate will add popular music competencies for students in communications media, music, and other areas. Audition required.

Certificate—Popular Music Studies (1) 19

Core Courses: 13

APMU _____	Two semesters of Applied Music (1cr each)	2cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 414	Music, Media, and Culture	3cr
MUSC 114	Analysis of Popular Music	3cr
MUSC 140	Popular Music Ensemble (2)	2cr

Electives: 6

Two courses from the following:
 COMM 354, 459, MUHI 333 3cr

- (1) An audition on an instrument (including voice) or a portfolio of recorded compositions is required for entrance into the program.
- (2) Two semesters of this 1cr course are required.

Department of Theater and Dance

Website: www.iup.edu/theater

Brian R. Jones, Chairperson; Boda-Sutton, Cole, Gretta, Kemp, Pipkin-Hutchison, DeSoto-Jackson, Schwartz, Van Dyke; and professors emeriti Blackledge, 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, creative orientation, and a disciplined work ethic, skills necessary in most endeavors. The department is committed to

- providing comprehensive course work from introductory through advanced levels of study in most major areas of theater and dance;
- providing diverse production opportunities at all levels to challenge students as artists by developing proficiency in one or more of the areas of composition (playwriting, choreography, and devising), research, performance, directing, and production (technical and design);
- providing opportunities for stimulating the intellectual and artistic growth of faculty members and students through collaborative research;
- enriching the aesthetic life of the university and surrounding community;
- cultivating each student's ethic of collaboration, personal discipline, respect, creative growth, and artistic sensibility.

The department offers a bachelor of arts degree, a dance minor, and a theater minor. The BA degree program in theater provides for the study of theater within a broad liberal arts education. The Dance minor totals 18 controlled credits, while the Theater minor consists of 15 credits in theater course work approved by the chairperson of the department.

The **BA—Theater, Musical Theater Track** degree offers students knowledge of and training in all aspects of musical theater within a liberal arts. Students entering the program will be advised to explore many dimensions of theater, music, and dance and develop as singing actors with well developed additional skills and knowledge. Successful graduates will be able to compete for employment opportunities in the entertainment industry where musical talent is utilized. They will be capable of applying their learning to a wide variety of career options including, but not limited to, performance. For students' intent on a professional career in performance, additional learning through free electives (and even a minor area of study) is advised in acting, voice training, music proficiency, and dance.

The program combines strengths of the voice program of the Music Department with the performance programs of the Theater and Dance Department. An audition for both departments is required for entry into this challenging program.

Musical Theater students will perform in main stage musicals of all genres, cabaret offerings, and studio performances.

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 program requires satisfactory completion of an audition or interview, in addition to the university's general admission requirements. Audition information is available at www.iup.edu/theater.

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: 43-44

Fine Arts: Any except THTR 101

Mathematics: 3cr

Liberal Studies Electives: 3cr, no courses with THTR prefix

Major: (1) 42

Foundation Courses:

THTR 111	Foundations of Theater	3cr
THTR 116	Fundamentals of Theatrical Design	3cr
THTR 211	History and Literature: Classical or	
or 212	History and Literature: Renaissance	3cr
THTR 213	History and Literature: Modern and Contemporary	3cr

Core Skills Courses:

THTR 120	Stagecraft	3cr
THTR 122	Costume Workshop	3cr
THTR 140	Foundations of Performance	3cr
THTR 226	Stage Management	3cr

Theater Electives in Concentration Areas:

Choose one area:

Design/Tech/Management Area

THTR 225	Theater Graphics	3cr
THTR 489	Design/Technology/Management Studio	3cr
Electives: Two courses from the following:		6cr
DANC 355	Dance Production: Administration to Production	3cr
THTR 221	Basic Stage Lighting	3cr

THTR 223	Makeup for the Stage	
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

Performance Area

THTR 130	Stage Voice or	
or 131	Stage Movement	3cr
THTR 240	Acting I	3cr
THTR 340	Acting II	3cr
Electives: One course from the following:		3cr
DANC 485, THTR 231, 341, 342, 350, 487		

Theory and Criticism Area

THTR 310	Theater Criticism	3cr
THTR 311	Dramaturgy	3cr
Electives: Two courses from the following:		
THTR 350	Directing	3cr
ENGL 308	Critical Theory	3cr
ENGL 343	Drama	3cr
ENGL 350	Gender and Sexual Orientation in Literature, Theory, and Film	3cr
ENGL 434	Shakespeare	3cr
ENGL 450	Film Theory	3cr
ENGL 460	Topics in Film	3cr
ENGL 463	Topics in Global Literature and Film	3cr
ENGL 466	Topics in Theory	3cr

General Studies Area

THTR and/or DANC prefix courses as advised 12cr

Production Practicum: (2)		
THTR 486	Practicum in Production	5cr
Capstone:		
THTR 480	Theater Seminar	1cr
Free Electives:		34-35
Total Degree Requirements:		120
(1) Students must achieve a “C” or better in all major courses to graduate.		
(2) Students are required to be enrolled in THTR 486 while a theater major. Students must complete five different practicum assignments, with at least one assignment in design, technical, or management areas. With prior approval of the department chair, THTR 493 may be substituted.		

Bachelor of Arts—Theater/Musical Theater Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Fine Arts: MUHI 101 or DANC 102

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with THTR prefix

Major: (1) 42

Foundation Studies Courses: 14cr

MUSC 111 Theory Skills I 2cr

MUSC 115 Theory I 3cr

THTR 111 Foundations of Theater 3cr

THTR 211 History and Literature: Classical *or*

or 212 History and Literature: Renaissance 3cr

THTR 371 Musical Theater History 3cr

Core Skills Courses: 19cr

APMU 105 Voice I 1cr

APMU 155 Voice II 1cr

APMU 205 Voice III 1cr

APMU 255 Voice IV 1cr

DANC 260 Beginning Jazz Dance *or*

or 485 Dance Studio (Jazz) (2) 3cr

DANC 280 Beginning Ballet *or*

or 485 Dance Studio (Ballet) (2) 3cr

THTR 116 Fundamentals of Theatrical Design *or*

or 120 Stagecraft 3cr

or 122 Costume Workshop

or 221 Basic Stage Lighting

or 226 Stage Management

THTR 240 Acting I (3) 3cr

THTR 372 Musical Theater Auditioning 3cr

Experiential Learning: (4) 5cr

MUSC 126 Music Theater (5) 0-3cr

MUSC 128 Opera/Musical in Production Ensemble (5) 1cr

THTR 486 Practicum in Production (6) 0.5-3cr

THTR 493 Internship 1-3cr

Electives: Select 3cr from the following: 3cr

DANC 270, 485, MUSC 153, THTR 340, 350, 373, 471

Capstone: 1cr

THTR 480 Theater Seminar 1cr

Free Electives: 28-29

Total Degree Requirements: 120

(1) Students must achieve a “C” or better in all major courses.

(2) Level of dance studio competence will determine placement by faculty.

(3) Proficiency in acting studio fundamentals is prerequisite. Students who do not demonstrate proficiency at audition will be required to take THTR 140.

(4) Completion of eight different production experiences required.

(5) Proficiency in music theory is prerequisite. Students who do not demonstrate proficiency at audition will be required to take MUSC 110.

(6) Repeated for credit.

Minor—Theater 18

The Theater minor provides a foundation; students must meet with the department chair for initial advisement to be admitted into the minor. The minor will be tailored to individual student goals with a course plan. (1)

Required Course: 3
THTR 111 Foundations of Theater 3cr

One course from the following: 3

THTR 120 Stagecraft 3cr

THTR 122 Costume Workshop 3cr

THTR 221 Basic Stage Lighting 3cr

THTR 486 Practicum in Production (2) 1-3cr

Electives: 12-15

Courses with a THTR prefix as advised (3)

(1) THTR 101 satisfies the Liberal Studies Fine Arts requirement but may not be counted toward the Theater minor.

(2) Practicum credit is gained through assignment to theater and dance company productions under the supervision of a faculty member. It is usually granted at 1-2cr for an assignment. Therefore, more than one assignment will need to be completed if a student wishes to accumulate exactly 18cr in the minor. It is possible to complete one practicum assignment and complete the balance of the minor with additional electives. This will usually result in 19 or 20cr in the minor.

(3) Six credits at 300 level or above is required.

Minor—Dance

The Dance minor 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. Williams, Interim Dean

Amy R. Cook, Assistant Dean for Business Operations

Sally M. McCombie, Dean's Associate for Academic Affairs

Lon H. Ferguson, Dean's Associate for Administration

Website: www.iup.edu/healthhumanserv

The College of Health and Human Services comprises nine multifaceted departments that offer 26 programs leading to a baccalaureate degree, 16 master's degree programs, eleven minors, three credit-bearing certificate programs, and four noncredit certificate programs. The departments in the college are Criminology and Criminal Justice; Culinary Arts; Employment and Labor Relations; Food and Nutrition; Kinesiology, Health, and Sport Science; Hospitality Management; Human Development, Fashion, and Interior Design; 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, internships, clinical experiences, service-learning opportunities, and cooperative education 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.

College Majors

- **Athletic Training**
- **Child Development and Family Relations**
- **Clinical Laboratory Science**
- **Criminology** (Pre-law Track available)
- **Employment and Labor Relations** (graduate program only)
- **Fashion Merchandising**
- **Health and Physical Education** (Tracks available: K-12 Teacher Education*, Community Health Education, Recreation Leisure)
- **Hospitality Management**
- **Interior Design**
- **K-12 Family and Consumer Sciences Education***
- **Nuclear Medicine Technology**
- **Nutrition** (Tracks available: Culinary Dietetics, Dietetics, Nutrition)
- **Nursing** (Licensed Practical Nurse Track available)
- **Physical Education and Sport** (Programs available: Exercise Science, Pre-Athletic Training, Sport Administration)
- **Public Health** (Concentrations available: Behavioral and Mental Health, Environmental and Occupational Health, Epidemiology and Biostatistics)
- **Respiratory Care** (Certified Respiratory Therapist Track available)
- **Safety, Health, and Environmental Applied Sciences**

College Minors

- **Child Development and Family Relations**
- **Community Health**
- **Criminology**
- **Cyber Security**
- **Effective Teamwork and Communication**
- **Global Health**
- **Nutrition**

- **Pre-law Interdisciplinary**
- **Safety, Health, and Environmental Applied Sciences**
- **Sport Management**
- **Sustainability Studies**

Credit Certificate Programs

- **Athletic Coaching**
- **Gerontology**
- **Shale, Gas, and Energy**

Noncredit Certificate Programs

- **Baking and Pastry**
- **Criminal Justice Training**
- **Culinary**
- **Paramedic**

* Programs leading to PA Teacher Certification, also available Driver Education

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 dean of the College of Health and Human Services.

Pre-law Interdisciplinary Minor

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Seven courses, including at least one from each of the areas (no courses with student's major prefix):

<i>Business:</i>	ACCT 201, ACCT 202, BLAW 235
<i>Criminology:</i>	CRIM 210, 215, 225, 255
<i>Economics:</i>	ECON 121, 122, 332
<i>English:</i>	ENGL 212, 227, 265, 310, 321
<i>History:</i>	HIST 320, 341, 342, 346, 475
<i>Philosophy:</i>	PHIL 101, 122, 130, 221, 270, 320, 450
<i>Political Science:</i>	PLSC 358, 359, 361, 405

Bachelor of Science—Public Health

The Bachelor of Science with a major in Public Health will graduate students who will help meet Pennsylvania's workforce needs in public health and health care related fields, and will help meet the strong demand for trained public health professionals projected by national and regional studies. This degree will prepare students for jobs in health administration, community health, and health education. Upon completion of the program, students will understand the science of human physical and mental health, the epidemiology of infectious and chronic diseases, as well as the complications of the US and global health care systems with regard to access and ethics of the disparities in health care delivery. The program offers three concentrations: **Environmental and Occupational Health, Behavioral and Mental Health, and Epidemiology and Biostatistics.**

Bachelor of Science—Public Health/Environmental and Occupational Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 217

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr

Concentration: Environmental and Occupational Health 23
BIOL 221, 323; CHEM 101, 102; SAFE 330 or 430, 335, 361

Free Electives: (1) 17-21

Total Degree Requirements: 120

(1) Minor or certificate recommended.

Bachelor of Science—Public Health/Behavioral and Mental Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 217

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr

Concentration: Behavioral and Mental Health 18
PSYC 332 and 374; SOC 361 or 362 or 363; SOC 448 and 2 electives

Free Electives: (1) 22-26

Total Degree Requirements: 120

(1) Minor or certificate recommended.

Bachelor of Science—Public Health/Epidemiology and Biostatistics Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 121

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr

Concentration: Epidemiology and Biostatistics 23
CHEM 101, 102; FDNT 422; KHSS 472; MATH 216, 411, 412

Free Electives: (1) 17-21

Total Degree Requirements: 120

(1) Minor or certificate recommended.

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally or even more important than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major course work minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The coursework of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20

Required Courses: 12

COMM 261	Teamwork and Communication Skills for College and Career (1)	3cr
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LDSP 361	Introduction to Leadership	3cr
SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (2, 3)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (4)	3cr
Interdisciplinary Teamwork Course: (5)		3-4
One course approved as a Teamwork-Intensive section (T-Course) course.		3-4cr
Capstone Courses: (6)		2-3
TMWK 461	Teamwork and Communication in Research (7)	1cr
And one to two credits of independent study, honors thesis, or undergraduate research (8)		1-2cr
<p>(1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.</p> <p>(2) SOC 161 counts toward the Liberal Studies Social Science requirement.</p> <p>(3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.</p> <p>(4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.</p> <p>(5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.</p> <p>(6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches: 1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or 2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.</p> <p>(7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.</p> <p>(8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.</p>		

Global Health Minor

Global health is an area for study, research, and practice that places a priority on improving health and achieving health equity for all people worldwide. The Global Health minor will equip students interested in health and medicine with the analytical and critical-thinking skills needed to understand, explain, and critique health inequalities. They will recognize how these health disparities result from globalization and the need for promoting health equity in areas of the world with under-resourced and constrained health care. The minor is organized around six global health pathways: (1) food, nutrition, and hunger; (2) environmental justice; (3) law, ethics, and policy; (4) disaster, conflict, and displacement; (5) gender, sexuality, and reproductive health; and (6) aging. Students will select one of the six pathways and will complete 12 credits in the selected pathway, in addition to Introduction to Global Health and either Medical Anthropology or Medical Sociology.

Health topics, theories, and research methods as addressed in the social sciences will advance students' interdisciplinary understandings of health disparities, with a corresponding awareness of health equity. Practicums, through field school participation, internships, and other experiential learning opportunities, will merge course material with real world praxis, and will provide students with greater insights into global health and its contributions. The Global Health minor will prepare students for graduate studies in health-related fields and careers in health-promoting governmental agencies and non-governmental organizations (NGOs). Ethnographic field school, independent study courses, and internship courses may be applied to each global health pathway with the approval of the Global Health minor committee. Students should consult with the program coordinator to determine if there are any prerequisites for the courses listed below. The program coordinator will work with individual departments to determine if students may qualify for prerequisite exemptions. Course substitutions will be permitted with the approval of the Global Health minor committee.

Minor—Global Health (2, 5)		18
Core Courses:		6
ANTH 240	Introduction to Global Health	3cr
AHTR 444	Medical Anthropology <i>or</i>	3cr
<i>or</i> SOC 442	Medical Sociology	3cr
Select one Global Health Pathway		12

Food, Nutrition, and Hunger (7 courses, choose 4) (3, 4)

At least one course must have a FDNT prefix.

The courses in this pathway offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine world needs associated with food, nutrition, and health.

ANTH 430, ECON 360, 362, FDNT 143 (1) *or* NURS 143 (1), FDNT 415, 470, SOC 337

Environmental Justice (7 courses, choose 4) (3, 4)

The courses in this pathway offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine the linkages between environmental issues in the world and health.

ANTH 420, BIOL 221, ECON 362, FDNT 415, GEOG/RGPL 343, PHIL 270, SOC 417

Law, Ethics, and Policy (9 courses, choose 4) (3, 4)

The courses in this pathway will allow students to learn about using law and ethics to develop and advocate for legislation and policies designed to address social injustice and improve health in the world.

ANTH 352, 360, ECON 360, 362, NURS/ELR 314, PHIL 130, PLSC 405, SOC 362, 452

Disasters, Conflicts, and Displacement (6 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective to examine natural disasters and armed conflicts that result in displacement and poor health in many parts of the globe.

ANTH 352, 370, NURS 102, PSYC 378, RGPL 103, SOC 337

Gender, Sexuality, and Reproductive Health (10 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine gender, sexuality, and related health issues as well as reproductive health knowledge and services in the world.

ANTH 250, BIOL 117, ENGL 336, KHSS 143 (1), LGBT 200, PLSC 405, PSYC 379, SOC 251, 363, 410

Aging (8 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine fundamentals of global aging and health.

ANTH 340, ECON 362, FDNT 410, KHSS 350, PSYC 312, 378, SOC 357, 452

- (1) Only one 143 Liberal Studies class may be taken in a student's entire program.
- (2) At least six credits in the selected pathway must be at the 300 level or above.
- (3) Only one 100-level course may count in the selected pathway.
- (4) Only two courses in the selected pathway may come from the student's major.
- (5) With the exception of GLOB courses, no course prefix may be used more than twice without written permission from the program director.

Sustainability Studies Minor

Susan M. Comfort and Amanda B. Poole, Coordinators

The Sustainability Studies minor is an interdisciplinary program that draws from expertise across the university. The program conceptualizes "sustainability" as an interdisciplinary approach to knowledge production and action that focuses on "the health and integrity of human societies and the natural world." Sustainability is classically defined as a stool with three legs—the social, the economic, and the environmental; the purpose of this program is to address the challenges of sustainability by balancing the

humanities, social sciences, and natural sciences. The minor equips students to broaden their thinking about the origins of sustainability problems and possible solutions to include human institutions, ethics and cultures, as well as technologies and natural sciences. In so doing, the minor aims to foster student agency with regard to research on sustainability, responsibility to both human and non-human life, and civic engagement with local sustainability projects. The minor can supplement all majors in the university. Career possibilities include positions in design, law, food industries, planning and architecture, education, building certification, renewable energy, and waste management.

Students must complete 18 credits and a capstone experience (described below) to earn a minor in sustainability studies. The program's interdisciplinary approach encourages students to take courses from a variety of departments. The program is structured as follows:

1. All students will take SUST 201 Introduction to Sustainability.
2. Students must then take at least 12 credits from Category A, defined as courses in which substantial content is foundational to engagement with sustainability. These credits must be distributed across three "clusters," each of which denotes a major aspect of sustainability. Having taken one course from each of the three clusters, students will then be able to take the remaining Category A credits from a cluster of their choosing.
3. Only 3cr may come from Category B, defined as courses in which significant content is foundational to engagement with sustainability. Because their content may vary, courses from Category B must be approved by the program director to count for the minor.
4. At least 6cr must be at the 300 level or above.
5. Only one course may come from the student's major.
6. With the exception of SUST courses, no course prefix may be used more than twice without written permission from the program director.
7. Special topics, independent study courses, and internship courses may be applied to either Category A or Category B with the approval of the Sustainability Studies Committee.
8. Students should consult with the program director to determine if there are any prerequisites for the courses. Through counseling, the program coordinator will work with individual departments to determine if students may qualify for prerequisite exemptions.
9. Students will work with an advisor from the Sustainability Studies program to develop a capstone experience that synthesizes their knowledge and skills related to sustainability. This requirement may be fulfilled by one of the following options: a portfolio, conference presentation, or other scholarly activity approved by the program director.

Minor—Sustainability Studies 18

Required course: 3

SUST 201 Introduction to Sustainability 3cr

Category A 12-15

Cluster I: Ethics, Culture, and Society

ANTH 420 Environmental Anthropology 3cr

ANTH 430 Anthropology of Food 3cr

ENGL 361 Environmental Literature 3cr

HIST 385 People in Nature 3cr

PHIL 270 Ethics and the Environment 3cr

RLST 365 Native North American Religions 3cr

Cluster II: Natural Sciences and Environmental Stewardship

BIOL 103 Life on Earth 4cr

BIOL 114 Environmental Science 3cr

BIOL 115 Biotic Diversity of North America 3cr

BIOL 201 Principles of Ecology and Evolution 4cr

BIOL 221 Environmental Health and Protection 4cr

BIOL 272 Conservation of Plant and Animal Resources 3cr

BIOL 450 Field Biology at Pymatuning Laboratory of Ecology 4cr

BIOL 490 Field Studies in Biology 3cr

GEOS 101 The Dynamic Earth 3cr

GEOS 103 Oceans and Atmospheres 3cr

GEOS 310 Environmental Geology 4cr

GEOS 370 Oceanography 4cr

PHYS 101 Energy and Our Environment 3cr

PSYC 331 Environmental Psychology 3cr

Cluster III: Environmental Policy, Economics, and Law

CRIM 374 Environmental Crime and Justice 3cr

ECON 361 Environmental Economics 3cr

FDNT 470 Human Food Consumption Patterns 3cr

GEOG/RGPL 103 Global Cities: Issues in Planning and Development 3cr

GEOG 104 World Geography: Global Context 3cr

GEOG/RGPL 343 Geography of Fresh Water Resources 3cr

GEOG/RGPL 345 Biogeography for Environmental Managers 3cr

GEOG/RGPL 440 Conservation: Environmental Analysis 3cr

MKTG 444 Green Marketing 3cr

RGPL 426 Environmental Land Use Planning 3cr

Category B 0-3

ANTH 110, 213, 314, 444, ART 113, 213, BIOL 323, 362, 456, 460,

ECON 338, 339, 365, GEOG 230, 435, GEOS 150, 152, 201, 324,

JRNL 375, 466, KHSS 143, NURS 143, PHIL 122, PLSC 250, 389,

PSYC 330, RLST 485, SOC 314, 337, 340, 417

Department of Criminology and Criminal Justice

Website: www.iup.edu/criminology

Robert J. Mutchnick, Chairperson; Austin, Cooper, Correia, Dulisse, Fitch, Frenzel, Giever, Gossett, Hanrahan, Ishoy, Kim, Lee, Lewis, Martin, Merlo, Mummert, Phaneuf, Roberts, Scott; and professors emeriti Gibbs, Gido, McCauley, Wilson

The Department of Criminology and Criminal Justice offers students seeking careers in criminology or criminal justice a broad liberal arts education that encourages them to think critically about crime and justice issues and prepares them for careers in the criminal justice system. The degree programs offered are the bachelor of arts program in criminology and the bachelor of arts program in criminology/pre-law. 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 and criminal justice 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 and criminal justice. For example, employment opportunities normally exist in more than 50 federal agencies (e.g., Federal Bureau of Investigation, US 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 level and in research divisions of various agencies.

Bachelor of Arts—Criminology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

Mathematics: MATH 217

Natural Science: SCI 107/117 and CHEM 105 or BIOL 106 and 107 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:

Two courses from each group:

Group A: The Criminal Justice System 6cr
CRIM 205, 215, 225, 235, 255

Group B: Critical Issues in Criminology 6cr
CRIM 344, 354, 374, 384, 394

Group C: Diversity Issues in Criminology 6cr
CRIM 410, 450, 470

Free Electives: (1) 40-41

Total Degree Requirements: 120

(1) Completion of a minor is strongly recommended.

Bachelor of Arts—Criminology/Pre-law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

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:

Two courses from each group:

Group A: The Criminal Justice System 6cr
CRIM 205, 215, 225, 235, 255

Group B: Critical Issues in Criminology 6cr
CRIM 344, 354, 374, 384, 394

Group C: Diversity Issues in Criminology 6cr
CRIM 410, 450, 470

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, 227, 265, 310, 321

History: HIST 320, 341, 342, 346, 475

Philosophy: PHIL 101, 122, 130, 221, 270, 320, 450

Political Science: PLSC 358, 359, 361, 405

Free Electives: 19-26

Total Degree Requirements: 120

Minor—Criminology (1)

18

Required Courses:

CRIM 101	Crime and Justice Systems (2)	3cr
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 Controlled Electives Group B and one from Group C (3, 4)		6cr

- (1) Must have formal Department of Criminology and Criminal Justice approval to be admitted to Criminology minor.
 - (2) Meets Liberal Studies Social Science requirement.
 - (3) For students in the Computer Science/Cyber Security program, CRIM 321 may be substituted for Group B elective.
 - (4) For students in the Computer Science/Cyber Security program, CRIM 323 may be substituted for Group C elective.
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Minor—Cyber Security (1)

18

Required Courses:

COSC 108	Introduction to Programming via Alice (2) <i>or</i>	3cr
<i>or</i> 110	Problem Solving and Structured Programming	
COSC 316	Host Computer Security	3cr
COSC 345	Computer Networks (3) <i>or</i>	
<i>or</i> COSC/IFMG 352	LAN Design and Installation (3)	3cr
CRIM 101	Crime and Justice Systems (4) <i>or</i>	3cr
<i>or</i> 102	Survey of Criminology (4)	
CRIM 321	Cybersecurity and Loss Prevention	3cr
CRIM 323	Cybersecurity and the Law	3cr

- (1) Computer Science/Cyber Security Track students are not eligible to take this minor; instead, they must take a criminology minor.
 - (2) Computer science majors cannot count COSC 108 or 110; instead, they must take one additional course from the following: CRIM 344, 354, 401.
 - (3) Computer science majors cannot count COSC/IFMG 352. Computer science majors must take COSC 345.
 - (4) Criminology majors cannot count CRIM 101 or 102; instead, they must take one additional course from the following: COSC 341, 356, 362, 427, 429, 432, 454, 482, IFMG 382. Students must select COSC 356 to receive NSTISSE 4011 certification.
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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 17 schools in the commonwealth certified to offer Act 120 training, an 802-hour program that qualifies graduates to be municipal police officers. The police academy is located at the Indiana campus at IUP and various satellite locations. The center also offers programs for in-service personnel in fulfillment of annual mandatory continuing education requirements 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 for more information.

Department of Culinary Arts

Website: www.iup.edu/culinary

Lynn A. Pike, Chairperson; Barnes, Battaglia, DeMane, Harber, Kapusta, McIsaac, Nutter, Rupert, Steele; and professors emeriti Brown, Klinger, Wutsch

The Department of Culinary Arts offers a four-semester (16 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 and Baking and Pastry Arts program are on the culinary campus in Punxsutawney 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 these programs may transfer 42 credits of course work toward a bachelor of science degree program in hospitality management, 32 credits toward a bachelor of science degree program in nutrition, or 21 credits toward a bachelor of science degree program in family and consumer science education. In addition to these programs, a European study option is also available.

Department of Employment and Labor Relations

Website: www.iup.edu/elr

David M. Piper, Chairperson; Clawson, Decker, Korn; and professors emeriti Bullard, 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 course work leading to an undergraduate major or degree, it does offer several undergraduate courses that are open to students of any major or college.

Department of Food and Nutrition

Website: www.iup.edu/foodnutrition

Rita M. Johnson, Chairperson; Clark, Hsiao, Laquatra, Seybold, Taylor-Davis; and professors emeritae Cessna, Dahlheimer, Minnick, Steiner

The Department of Food and Nutrition offers a bachelor of science degree program in nutrition with three tracks: Dietetics, Culinary 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 that are available to all university students. These include FDNT 143, Current Issues in Nutrition and Wellness, a course that meets the Dimensions of Wellness requirement, and FDNT 145, Personal Nutrition, a Liberal Studies elective.

Dietetics Track

Students who complete the Dietetics Track (Didactic Program in Dietetics) meet the academic requirements as accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics. This track prepares individuals to translate 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. Graduates qualify for admission to ACEND-accredited dietetic internships in pursuit of dietetic registration.

Culinary Dietetics Track

Students who complete the Culinary Dietetics Track meet the academic requirements as accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics. 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 before 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 ACEND-accredited dietetic internships in pursuit of dietetic registration.

Nutrition Track

The Nutrition Track provides a foundation in food and nutrition integrated with another field of the student's choosing. Career opportunities for a graduate of the Nutrition Track include public health, foodservice, communications media, gerontology, wellness education and planning, culinary arts, and as an advocate for nutrition programming and interventions.

Students who wish to pursue graduate education in nutrition or other natural science programs should work carefully with their adviser so that appropriate chemistry, biology, and nutrition electives are chosen.

Nutrition Minor

This minor is recommended for students majoring in related disciplines, such as nursing and allied health, pre-medical, pre-pharmacy, hospitality management, kinesiology, health, and sport science, child development and family relations, and family and consumer sciences education, and for students who have a personal, consumer-oriented interest in nutrition. Science prerequisites for the minor are, at a minimum, CHEM 101/102 or BIOL 104/106.

Bachelor of Science—Nutrition/Dietetics Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Dimensions of Wellness: KHSS 143

Mathematics: MATH 217

Natural Science: CHEM 101-102 or 111-112 (1)

Social Science: ECON 101 or 121, PSYC 101, SOC 151 or 161

Liberal Studies Elective: 3cr, no courses with FDNT prefix

Major: 25

Required Courses: (1)

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
Controlled Electives:		
Dietetics Track:		
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
HOSP 256	Human Resources in the Hospitality Industry	3cr
HOSP 259	Hospitality Purchasing	3cr
HOSP 313	Food Production and Service	4cr
MGMT 310	Principles of Management	3cr

Other Requirements:	13
Natural Science Sequence:	
BIOL 105, 155, 241, CHEM 255	13cr

Free Electives:	10
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Total Degree Requirements:	120
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(1) CHEM 231 is also required if CHEM 111-112 is taken and is added to major credits.

Bachelor of Science—Nutrition/Nutrition Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 217

Natural Science: CHEM 101-102 or 111-112 (1)

Social Science: ANTH, ECON, JNRL, PLSC, PSYC, or SOC prefix

Liberal Studies Elective: 3cr, no courses with FDNT prefix (2)

Major: 20-24

Required Courses: (1)

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 364	Methods of Teaching Food and Nutrition (3)	3cr
FDNT 402	Community Nutrition	3cr
FDNT 493	Internship	3cr

Controlled Electives: 27-30

Nutrition Track:

FDNT electives (200 level and above) (4) 6-12cr

Program minor, certificate, or core concentration required for program completion (5) 18-21cr

Other Requirements: 7-8

Natural Science Sequence: Select Option A or Option B (6)

Option A:

BIOL 104	Human Biology: How the Human Body Works	4cr
BIOL 106 <i>or</i> 113	Human Genetics and Health <i>or</i> Genetics in Modern Society	4cr 3cr

Option B:

BIOL 150	Human Anatomy	4cr
BIOL 240	Human Physiology	4cr

Free Electives: 14-22

Total Degree Requirements: 120

- (1) Students who take CHEM 111/112 in place of 101, can take CHEM 231 instead of 102. CHEM 231 is then added to major credits.
- (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) FCSE 450 may be substituted, with permission of the Human Development, Fashion, and Interior Design department chairperson.

(4) Number of FDNT electives depends upon number of credits in the minor, certificate, or concentration.

(5) Select one of the following:

- Minor in anthropology, biochemistry, biology, business administration, chemistry, child development and family relations, communications media, educational technology, journalism and public relations, political science, psychology, psychological science, or sociology. Other minors with Food and Nutrition department chairperson permission.
- Certificate in culinary arts or gerontology.
- Core concentration including a series of courses in Hospitality Management (HOSP 101, 259, 260, 265, 320, and 335). Prerequisites must be met.

(6) Depending upon the student's minor and/or career interest, upper-level biology courses may substitute for some or all of these.

Bachelor of Science—Nutrition/Culinary Dietetics Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Dimensions of Wellness: KHSS, NURS, or FDNT 143

Mathematics: MATH 217

Natural Science: CHEM 101-102

Social Science: ANTH 470 or PLSC 101 or 111, PSYC 101, SOC 151 or 161

Liberal Studies Elective: 3cr, no courses with FDNT prefix (1)

Major: 30

Required Courses: (2)

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

Other Requirements: 45

Certificate in Culinary Arts (1, 3) 32cr

Natural Science Sequence: BIOL 241 or 270, 105, 155, CHEM 255 13cr

Free Electives: (4) 1

Total Degree Requirements: 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 44cr in Liberal Studies.
- (2) Students who complete their culinary certificate before 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.

Minor—Nutrition 18-19

Required Courses: 6

FDNT 212	Nutrition	3cr
FDNT 213	Life Cycle Nutrition	3cr

Controlled Electives: 12-13

Four additional courses from the following list. Other FDNT courses may be selected but must be pre-approved by the

department chair. Must meet any course prerequisites.
FDNT 150, 245, 355, 402, 410, 458, 470

Department of Hospitality Management

Website: www.iup.edu/hospitality-mgt

Stephen B. Shiring, Chairperson; Santicola, Sullivan, Wang; and professors emeriti Simkins, Woods

Hospitality Management prepares students for professional management careers within the hospitality industry, a global service industry comprising diverse and exciting employment opportunities. Program graduates obtain general and specialized hospitality skill sets and knowledge in preparation for management employment in hotels, resorts, restaurants, clubs and beverage operations, theme parks, contract food services, special events, catering, cruise lines, and other travel and tourism venues and operations. 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: 43-44

Mathematics: MATH 101 or higher

Natural Science: Option II

Social Science: ECON 101 or 121

Liberal Studies Elective: 3cr, no course with HOSP prefix

Major: (1) 58

Required Courses:

FDNT 151	Foods Laboratory	1cr
HOSP 101	Introduction to the Hospitality Industry	3cr
HOSP 235	Tourism Management	3cr
HOSP 256	Human Resources in the Hospitality Industry	3cr
HOSP 259	Hospitality Purchasing	3cr
HOSP 260	Hotel Operations Management	3cr
HOSP 265	Hospitality Cost Management	3cr
HOSP 280	Special Event Management	3cr
HOSP 320	Hospitality Marketing	3cr
HOSP 335	Legal Issues in Hospitality	3cr
HOSP 365	Hospitality Physical Plant Management	3cr
HOSP 402	Beverage Management	3cr
HOSP 411	Contemporary Issues in Hospitality	3cr
HOSP 470	Hospitality Business Planning	3cr
HOSP 493	Internship (First Experience)	3cr (2)
HOSP 493	Internship (Second Experience)	3cr
Controlled Electives: One 12cr concentration required: (3)		12cr

Hotel and Lodging Concentration:

HOSP 250	Resort Management	3cr
HOSP 255	Housekeeping Management	3cr
HOSP 350	Introduction to the Casino Industry	3cr
HOSP 420	Hotel Sales	3cr

Restaurant and Food Service Concentration:

HOSP 130	Food Service Sanitation	1cr
HOSP 285	Service, Menu Planning, and Facilities Design	3cr
HOSP 300	Critiquing Commercial Restaurants	1cr
HOSP 400	Restaurant Revenue Management	3cr
HOSP 413	Restaurant Food Production and Service	4cr

Service Events Management Concentration:

HOSP 270	Professional Wedding Planning and Consulting	3cr
HOSP 272	Meeting and Convention Management	3cr
HOSP 343	Fund-Raising for Special Events	3cr
HOSP 346	Catering for Special Events	3cr

Free Electives: (2) 18-19

Total Degree Requirements: 120

- (1) Department-specified kitchen food preparation uniform and knife kit are required for major lab courses.
- (2) Each student must complete a minimum of 120 hours in each of two supervised internship experiences. A minimum of 40 work hours for each

scheduled credit within a professional hospitality industry operation, either within one single operating department or rotating among various unit departments. See department internship coordinator for detailed information.

- (3) Each student must complete one of the 12cr concentrations.

Department of Human Development, Fashion, and Interior Design

Website: www.iup.edu/hdes

Karen M. Scarton, Chairperson; Blood, Brown, Hwang, Palmer, Puhlman, Su, Venetta; and professors emeriti Cramer, Gallati, Gordon, Henry, Hovis, Kesner, A. Nelson, L. Nelson, Swinker, Streifthau, Viggiano

The Department of Human Development, Fashion, and Interior Design 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 on 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 K-12 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.

Child Development and Family Relations

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 to 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" grade or better in CDFR 218 and CDFR 224 and maintain a 2.0 GPA in major courses to graduate from the CDFR program.

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 course work 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 with the following specifications: 46-47

Mathematics: 3cr

Social Science: ANTH 110 or any global or multicultural social science course, PSYC 101, SOC 151 or 161

Liberal Studies Electives: 6cr, FCSE 315 and FDNT 145, no courses with CDFR prefix

Major: 46-47

Required Courses:

CDFR 218	Child Development	3cr
CDFR 224	Marriage and Family Relations	3cr
CDFR 310	Childhood Observation and Assessment	3cr
CDFR 321	Preschool Education: Play and Developmentally Appropriate Practices	3cr
CDFR 322	Early Care and Education <i>or</i>	
<i>or</i> 420	Infant/Toddler Mental Health (2) <i>or</i>	
<i>or</i> 481	Special Topics	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 Human Service Programs	3cr
CDFR 428	Family Dynamics	3cr
CDFR 429	Teaching in Child Development Centers	4cr
SOC 428	Child Abuse	3cr

Other Requirements: 3-4cr

Outside Courses:

NURS 202	Foundations of Child Health <i>or</i>	3cr
<i>or</i> BIOL 150	Human Anatomy	4cr

Free Electives: (1)

Three optional concentrations:

Early Intervention 18cr

CDFR 315, EDEX 111, 415, 460, KHSS 209, 370

Infant/Toddler Mental Health 15cr

CDFR 315, 420, 481, EDEX 111, 460

Youth and Families 15cr

CDFR 481, EDEX 460, FCSE 350, KHSS 450, PSYC 312

Total Degree Requirements: 120

- (1) Students are encouraged to declare a minor *or* complete one of three concentrations or fulfill the requirements for National Council for Family Relations Certificate Family Life Educator certificate. An internship can be completed with any one of the above options.
- (2) CDFR 420 can count as either a core course or as part of the concentration, but not in both places.

Minor—Child Development and Family Relations 18

Required Courses:

CDFR 218	Child Development	3cr
CDFR 224	Marriage and Family Relations	3cr
Four courses from the following (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 Human Service Programs	3cr

Family and Consumer Sciences Education

The K-12 Family and Consumer Sciences Education program prepares students for the teaching of family and consumer sciences-related subjects in the public schools. Course work 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: 47

Mathematics: MATH 151

Natural Science: CHEM 101-102

Social Science: PSYC 101, SOC 151 or 161

Liberal Studies Electives: 6cr, CDFR 218, MATH 152, no courses with FCSE prefix

College: 34

Preprofessional Education Sequence:

ACE 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 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

Major: 34

Required Courses:

CDFR 224	Marriage and Family Relations	3cr
CDFR 321	Preschool Education: Play and Developmentally Appropriate Practices	3cr
FCSE 101	Personal and Family Management	3cr
FCSE 312	Housing and Culture	3cr
FCSE 315	Consumer Economics and Family Finance	3cr
FDNT 150	Foods	3cr
FDNT 151	Foods Laboratory	1cr
FDNT 212	Nutrition	3cr
FSMR 112	Fundamentals of Clothing Construction	3cr
FSMR 215	Textiles	3cr

Controlled Electives:

Two courses from the following: FSMR 180, 252, 434, CDFR 323, 411, 425, 427, 429; FDNT 213, 245; HOSP 130, 413 (1); INDS 105, 205; KHSS 450

Free Electives: 5

(#) Total Degree Requirements: 120

(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.

(1) Must take the prerequisites HOSP 130, 150, and have instructor permission.

(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.

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 this 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 either Fashion or Accessories Design.

Graduates of this program are being prepared for entry-level positions such as a 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: 46-48

Mathematics: MATH 105 or 217 (1)

Social Science: ECON 121, PSYC 101, GEOG 104 or ANTH 110 or 211

Liberal Studies Electives: 6cr, COSC/IFMG 101 or IFMG 110, ECON 122, no course with FSMR prefix

Major: 30

Required Courses:

FSMR 112	Fundamentals of Clothing Construction	3cr
FSMR 180	Introduction to Fashion	3cr
FSMR 215	Textiles	3cr
FSMR 280	Introduction to Apparel Buying	3cr
FSMR 357	Global Issues in Textiles and Apparel	3cr
FSMR 380	Applications in Apparel Buying	3cr
FSMR 385	Ready-to-Wear Analysis	3cr
FSMR 434	Quality Control in Textiles	3cr
FSMR 456	Historic Costume	3cr
FSMR 480	Professional Development in the Fashion Industry	3cr

Controlled Electives: Three courses from the following: 9
FSMR 158, 212, 252, 258, 262, 281, 303, 468, 481, 482

Additional Requirements: 21-24

Required Courses:

Complete courses in one of the following options:

Option 1: Business Administration Minor (24cr)

JRNL 120 or ENGL 310 and the following Business Administration minor requirements (21cr): ACCT 201, 202, FIN 310, MGMT 310, MKTG 320, and two courses from BCOM 321, BLAW 235, IFMG 300, MGMT 330 (2) (Note: Students must meet all minor requirements listed in catalog.)

Option 2: Marketing Track (21cr) or Marketing Minor (24cr)

ACCT 201 and JRNL 120, BCOM 321, or ENGL 310, and the following Marketing Track Requirements (15cr): MKTG 320, MKTG 321, three 3cr 400-level MKTG courses
Marketing Minor (24cr): ACCT 201 and JRNL 120, BCOM 321, or ENGL 310, and the following Marketing Minor Requirements (18cr): MKTG 320, 321, four 3cr 400-level MKTG courses

Option 3: Small Business Management Track (21cr)

ACCT 201 and JRNL 120, BCOM 321, or ENGL 310, and MKTG 320, and the following Small Business Management Requirements: MGMT 275, 325 (3), two courses from MGMT 300, 310, 350, 403 (4)

Free Electives: 9-14

Total Degree Requirements:

120

- (1) Student should take MATH 105 (the prerequisite for MATH 115) instead of MATH 217 for their LS requirement if they wish to pursue a double major in a business subject or take MGMT 330 for a Business Administration minor.
- (2) Student will need to take MATH 115, 214, and be junior standing to take MGMT 330.
- (3) Prerequisites to be waived.
- (4) Student will need to take ACCT 202 and 300 in order to take MGMT 403.

Interior Design

The Interior Design program offers students opportunities in analyzing problems, synthesizing information, and implementing design solutions supportive of the needs of people and the environment. The program emphasizes creative problem solving through interdisciplinary experiences and communicating solutions. It enables graduates to adapt to a changing world by drawing on history while applying the principles of informed design and 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, hand drafting, design graphics and presentation techniques, color theory, building systems, materials and finishes, human factors, computer-aided drafting techniques, history of design, 3-D design, textiles, lighting, residential and commercial 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, theater, communications media, and business. Graduates are prepared for entry-level positions in commercial and residential design, sales, historical preservation, kitchen and bath design, and showroom management.

Bachelor of Science—Interior Design

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 47-48

Fine Arts: Fulfilled by ARHI 205

Humanities: PHIL 223 recommended

Mathematics: MATH 101 or higher

Natural Science: Option I, SCI 105-106 recommended

Social Science: PSYC 101, SOC 151 or 161

Liberal Studies Electives: 6cr, ARHI 207, ECON 122, no courses with INDS prefix

Major: 51

Required Courses:

FSMR 215	Textiles	3cr
INDS 105	Introduction to Interior Design	3cr
INDS 118	Interior Design Graphics	3cr
INDS 205	Color Theory and Application	3cr
INDS 218	Computer Technology for Interior Design	3cr
INDS 219	Kitchen and Bath Design	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	Building Systems I: Materials and Finishes	3cr
INDS 315	Residential Design Studio	3cr
INDS 370	History of Interior Design and Architecture I	3cr
INDS 380	History of Interior Design and Architecture II	3cr
INDS 405	Interior Design Professional Practice	3cr
INDS 464	Commercial Design Studio I	3cr
INDS 465	Commercial Design Studio II	3cr

Other Requirements:	15
Outside Concentration:	
<i>Business:</i> BCOM 321, MKTG 320	6cr
<i>Art:</i> ART 114; two courses from the following: ART 213, 214, 215, 216, 218, 219, COMM 271, 371, 471, THTR 116, 120, 221, 320, 321, 489	9cr
Free Electives: (1)	6-7
Total Degree Requirements:	120
(1) Students are encouraged to complete an internship.	

Department of Kinesiology, Health, and Sport Science

Website: www.iup.edu/kines

Elaine H. Blair, Chairperson; Ronald L. Trenney, Assistant Chair; Alman, Bayles, Black, Castle, Gerhart, Hsiao, Kostelnik, Kulik, Lorenzi, McKee, Racchini, Rivera, Pesci, Sloniger, Smith, Storti, Wachob; and professors emeriti Beck, Blacksmith, Clark, Cortazzo, Davis, Dickie, Eltz, Grove, Hornfeck, Klingaman, Mill, Montgomery, Moore, Neal, Robinson, Sledzik, Sloniger, Sutton, Tucker

The Department of Kinesiology, Health, and Sport Science 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 three programs of study: Teacher Education with potential to earn certification to teach in the Commonwealth of Pennsylvania, Community Health Education, and Recreation and Leisure Studies.
4. Bachelor of science program in physical education and sport, which includes programs in exercise science, pre-athletic training, and sport administration
5. Bachelor of science degree program 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 implications for both the present and future. Information is provided during class lectures and enhanced by a variety of practical learning experiences that 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 may be offered in activities such as golf, resistive exercise, scuba, swimming, and tennis.

The university's Liberal Studies requirements require that each student successfully complete KHSS 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 program in physical education and sport (PESP) 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 PESP 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.

Four specialty programs of study have been developed for the degree program in PESP. These programs consist of (1) Physical Education and Sport, (2) Physical Education and Sport—Exercise Science, (3) Physical Education and Sport—Pre-Athletic Training and (4) Physical Education and Sport—Sport Administration. These programs 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.

Exercise Science

IUP's Exercise Science program is accredited by the Committee on Accreditation for the Exercise Sciences under the auspices of the Commission on Accreditation of Allied Health Education Programs. 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 Kinesiology, Health, and Sport Science 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 KHSS 285, 286, 343, 347, 375, 410, 411, 414, 492, and 493; and (3) before 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. Purchase of small equipment such as stethoscopes and digital heart rate monitors will be required.

Pre-Athletic Training

The Pre-Athletic Training Track prepares students for admission into a professional-level masters degree program in Athletic Training. Accelerated program progression allows students who meet eligibility requirements to apply for early admission into IUP's Master of Science program in Athletic Training program. Students will work closely with an advisor to ascertain the likelihood of early admission into graduate school and will be advised to switch into another PESP Track if appropriate. The first four semesters of the Pre-Athletic Training Track align closely with the Exercise Science Track and allows for seamless transition into Exercise Science if early admission requirements are not likely to be met by the end of the sixth semester. The masters degree in athletic training will be implemented beginning Summer 2020.

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. A minor that will enhance their career objectives is encouraged.

Bachelor of Science Degree—Athletic Training

IUP's Athletic Training 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 component. The clinical education component entails a series of sequential laboratory courses and a minimum of four semesters of supervised field experience with the IUP Athletics Department and affiliated clinical sites (sports medicine clinics, physicians' offices/hospitals, high schools, and additional collegiate settings). Students must file an application for admission into the program during their third semester at IUP (fall of their sophomore year). Formal admission into the program is a prerequisite for assignment to clinical field experiences and enrollment in upper-level courses.

Formal 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 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 requirements for eligibility are (1) sophomore status (minimum of 36 credits), (2) minimum 2.8 cumulative and major GPA (major GPA for admission is calculated from the courses KHSS 185, 221, 345, and 346), (3) minimum of a "C" grade in KHSS 185, 221, 345, and 346, and (4) a completed application for admission. Additional details and required documentation that must accompany the application (clearances, screenings, directed observation, CPR certification, etc.) are outlined in the *Athletic Training Program Overview* and the Athletic Training program admissions packet. Both documents are readily available from the department office upon request. Once admitted, students must continue to demonstrate above-average academic and clinical performance in order to remain in good standing. Specific program progression and completion standards apply. Students must maintain a minimum 2.8 cumulative and major GPA, obtain a C grade or better in all required major courses, and pass a series of comprehensive examinations. Program retention, completion, and Board of Certification examination endorsement are contingent upon fulfillment of all program requirements. Students must obtain the *Athletic Training Program Overview* document from the department for full details regarding program progression, mediation, retention, and Board of Certification examination endorsement.

Students will no longer be admitted to the bachelor of science degree program in athletic training after December 2017.

Bachelor of Science in Education Degree—Health and Physical Education

The Bachelor of Science in Education—Health and Physical Education provides emphasis on pedagogical content and application. This program prepares students with the knowledge and experience to instruct in various learning environments. Three specialty programs of study have been developed for this degree program, including the K-12 Teacher Education Certification Track and two non-teacher certification tracks, Community Health Education and Recreation and Leisure Studies. These programs provide students with the theory, strategy, and application necessary to work with individuals in various instructional settings. Each program provides an interdisciplinary experience that prepares students for specific career paths as well as multiple credentialing options.

K-12 Teacher Education

The Health and Physical Education Teacher Education program is accredited by the National Council for Accreditation of Teacher Education. Requirements for the bachelor of science in education degree program 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 Communications section of this catalog.

Community Health Education (non-teacher certification)

This program of study focuses on health promotion and disease prevention through community educational services. This track prepares individuals to develop trainings and implement curriculum focused on better health and educational outcomes. Graduates of this program can seek employment with health and education agencies involved in community-based training and prevention related to HIV/STI/AIDS, obesity, dating violence and bullying, communicable diseases, tobacco, drugs and alcohol, sexual health and/or pregnancy prevention. Students can specialize in several emphasis areas, including Communications, Aging Populations, Nutrition, Physical Activity, Human Service, Child Studies, and Women's and Gender Studies. Graduates will be eligible to sit for the NCHEC's Certified Health Education Specialist (CHES) exam. This track does not lead to K-12 teacher certification. Requirements for the Community Health Education Track include the university's Liberal Studies requirements, the departmental core courses, and the Community Health Education required courses. Students must also maintain a cumulative GPA of 2.7 and a "C" or better in all of the required core courses within this track.

Recreation and Leisure Studies (non-teacher certification)

This program provides students with competencies to plan, implement, and assess recreation and sports programs in a variety of settings, including adapted sport programs, youth leagues, city parks and recreation departments, adventure travel and tourism, and commercial recreation facilities. Students can focus on several emphasis areas including aquatics, special populations, coaching, and dance. This program provides graduates with the prerequisite knowledge necessary to sit for the National Recreation and Parks Association Certified Parks and Recreational Professional (CPRP) examination. Graduates interested in qualifying for the CPRP exam must also obtain no less than one year of full-time experience in the field. This track does not lead to K-12 teacher certification. Requirements for the Recreation and Leisure Studies Track include the university's Liberal Studies requirements, the departmental core courses, and the Recreation and Leisure Studies required courses. Students must also maintain a cumulative GPA of 2.7 and a "C" or better in all of the required core courses within this track.

Community Health Minor

The Community Health minor will help prepare students who desire to work in programs that communicate and advocate for health and health education services. This minor would be of interest to sociology, child development and family relations, food and nutrition, and allied health majors who are interested in working with targeted populations on making healthy behavior changes through planned instruction and outreach.

Sport Management Minor

This minor is recommended for students majoring in related disciplines such as exercise science, health and physical education, athletic training, accounting, communications media, economics, finance, human resource management, management, and marketing and for students who have a personal interest in sport management. It provides students with the necessary skills to work in management within the sport industry.

Athletic Coaching Certificate

This certificate is recommended for students majoring in disciplines such as exercise science, health and physical education, athletic training, and education and for students who have a personal interest in coaching as a profession. It provides students with the necessary skills to work in the athletic coaching industry. Students will have a chance to earn a variety of certifications, including ASEP Coaching Certification, Certified Disability Sport Specialist, Certified Special Olympics Coach.

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: KHSS 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 Communications, for correct procedures.

Health and Physical Education Core

The Health and Physical Education curriculum identifies a required core of studies that 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 that 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.

Bachelor of Science—Physical Education and Sport (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 217

Natural Science: BIOL 104 and 106, CHEM 101 and 102, or SCI 105 and 107

Social Science: PSYC 101

Liberal Studies Electives: no courses with KHSS prefix

Major: 21-23

Core Requirements:

KHSS 135	Careers in Kinesiology, Health, and Sport	1cr
KHSS 175	Prevention and Care of Injuries to the Physically	
or 185	Active or Introduction to Athletic Training	2-3cr
KHSS 209	Motor Behavior	3cr
KHSS 221	Human Structure and Function or	
or KHSS 256	Applied Human Structure and Conditioning or	
or BIOL 150	Human Anatomy	3-4cr
KHSS 341	Evaluation in Health and Physical Education	3cr
KHSS 344	Adapted Physical Activity and Sport or	
or 370	Adapted Physical Education	3cr
KHSS 441	Psychosocial Implications for Health and	
or 225	Physical Education or Social Issues and Sport	3cr
KHSS 493	Internship	3cr

Professional Requirements: 17-19

(All students must complete one of the program specific content areas outlined below.)

Content Area 1

FDNT 145	Introduction to Nutrition	3cr
KHSS 261	Water Safety Instructor or	
or 263	Aquatics	1cr
KHSS 285	Group/Individual Exercise Leadership	3cr
KHSS 286	Personal Training Practicum	3cr
KHSS 315	Biomechanics	3cr
KHSS 343	Physiology of Exercise	3cr
KHSS 375	Physiological Basis of Strength Training	3cr

Content Area 2

FDNT 145	Introduction to Nutrition	3cr
KHSS 286	Personal Training Practicum	3cr
KHSS 315	Biomechanics	3cr
KHSS 343	Physiology of Exercise	3cr
KHSS 345	Survey of Orthopedic Injuries in Sport and Exercise	3cr

KHSS 346	Preventive and Acute Care Skills in Athletic Training	1cr
KHSS 375	Physiological Basis of Strength Training and Conditioning	3cr

Content Area 3

ACE 103	Digital Instructional Technology	3cr
EDSP 102	Educational Psychology	3cr
KHSS 213	Recreational Sports and Lifetime Activities or	
or 325	School and Community Health	3cr
KHSS 216	Instruction of Fundamental Movement Skills or	
or 316	Instruction of Child Health Concepts	3cr
KHSS 218	Instruction of Tactical Skills and Fitness	
or 426	Concepts or Health Science Instruction	3cr
KHSS 318	Preprofessional Experience I	3cr

Content Area 4

KHSS 280	Aquatic Facilities Management	2cr
KHSS 292	Introduction to Sport Management	3cr
KHSS 320	Managing Facilities and Events in Sports	3cr
KHSS 335	Athletic Coaching	3cr
KHSS 445	Business Practices in Sport	3cr
KHSS 460	Law and Issues in Managing Sport	3cr

Department Electives: 15-18

Free Electives: 15-23

Total Degree Requirements: 120

(*) Admission to this program is by permission of advisor only.

Bachelor of Science—Physical Education and Sport—Exercise Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 47

Mathematics: MATH 101

Natural Science: BIOL 104 and 106 or CHEM 101 and 102

Social Science: PSYC 101, SOC 151 or 161

Liberal Studies Electives: 6cr, FDNT 145, MATH 217, no courses with KHSS prefix

Major: 23

Core Requirements:

KHSS 142	Foundations of Health, Physical Education, and Sport	3cr
KHSS 175	Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209	Motor Behavior	3cr
KHSS 221	Human Structure and Function	3cr
KHSS 341	Evaluation in Health and Physical Education	3cr
KHSS 343	Physiology of Exercise	3cr
KHSS 344	Adapted Physical Activity and Sport	3cr
KHSS 441	Psychosocial Implications for Health and Physical Education	3cr

Exercise Science Requirements: 50

BIOL 240	Human Physiology	4cr
KHSS 261	Water Safety Instructor or	
or 263	Aquatics	1cr
KHSS 285	Group/Individual Exercise Leadership	3cr
KHSS 286	Personal Training Practicum	3cr
KHSS 315	Biomechanics	3cr
KHSS 347	Physiology of Exercise Laboratory	1cr
KHSS 375	Physiological Basis of Strength Training	3cr
KHSS 410	Exercise Prescription	3cr
KHSS 411	Physical Fitness Appraisal	3cr
KHSS 413	Physical Activity and Aging	3cr
KHSS 414	Exercise Electrocardiography	3cr
KHSS 415	Lifestyle Behavior Management for Physical Activity	3cr

KHSS 416	Functional Training for Strength and Conditioning	3cr
KHSS 492	Health Fitness Instruction	3cr
KHSS 493	Internship	9cr
PHYS 151	Medical Physics Lecture	3cr
Total Degree Requirements:		120

Bachelor of Science—Physical Education and Sport—Pre-Athletic Training

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 217

Natural Science: BIOL 104 and 106

Social Science: PSYC 101

Liberal Studies Elective: 3cr, FDNT 145

Major: 21

Core Requirements:

KHSS 143	Careers in Kinesiology, Health, and Sports Science	1cr
KHSS 175	Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209	Motor Behavior	3cr
KHSS 221	Human Structure and Function	3cr
KHSS 341	Evaluations in Health and Physical Education	3cr
KHSS 343	Physiology of Exercise	3cr
KHSS 344	Adapted Physical Activity and Sport	3cr
KHSS 441	Psychosocial Implications for Health and Physical Education	3cr

Pre-Athletic Training Requirements: 28

BIOL 150	Human Anatomy	4cr
BIOL 200	Medical Terminology	2cr
BIOL 240	Human Physiology	4cr
CHEM 101	College Chemistry I	4cr
KHSS 286	Strength/Personal Training Practicum	3cr
KHSS 315	Biomechanics	3cr
KHSS 347	Physiology of Exercise Laboratory	1cr
KHSS 375	Physiological Basis of Strength Training and Conditioning	3cr
PHYS 111	Physics I Lecture <i>or</i>	
<i>or</i> 151	Medical Physics Lecture	3cr
PHYS 121	Physics I Lab <i>or</i>	
<i>or</i> 161	Medical Physics Lab	1cr

Free Electives: (1) 27

Total Degree Requirements: 120

(1) Some elective credits can be used towards the MS degree program in Athletic Training if eligible for early admission.

Bachelor of Science—Physical Education and Sport—Sport Administration

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 47

Mathematics: MATH 217

Natural Science: Option I—BIOL 104 and one 4cr laboratory course

Social Science: ECON 121, PSYC 101, Global and Multicultural Awareness

Dimensions of Wellness: KHSS 143 recommended or FDNT/NURS 143

Liberal Studies Electives: 6cr, BTED/COSC/IFMG 101, ECON 122, no course with KHSS prefix

Major: 15

Core Requirements:

KHSS 135	Careers in Kinesiology, Health, and Sport	1cr
KHSS 175	Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209	Motor Behavior	3cr
KHSS 225	Social Issues in Sports	3cr
KHSS 341	Evaluation in Health and Physical Education	3cr
KHSS 344	Adapted Physical Activity and Sport <i>or</i>	
<i>or</i> 337	Coaching Disability Sport	3cr

Sport Administration Requirements: 44

ACCT 201	Accounting Principles I	3cr
KHSS 256	Applied Human Structure and Conditioning	3cr
KHSS 280	Aquatic Facilities Management	2cr
KHSS 292	Introduction to Sport Management	3cr
KHSS 319	Field Practicum I	3cr
KHSS 320	Managing Facilities and Events in Sports	3cr
KHSS 351	Managing Budgets and Technology in Sport	3cr
KHSS 445	Business Practices in Sport	3cr
KHSS 460	Law and Issues in Managing Sport	3cr
KHSS 465	Sport Management Capstone	3cr
KHSS 493	Internship	3cr
MGMT 310	Principles of Management	3cr
MKTG 320	Principles of Marketing	3cr

Major Electives: Two courses from the following: 6cr

ACCT 202, BCOM 321, COMM 150, 251, ECON 239, FIN 310, HOSP 115, 280, KHSS 315, 333, 335, 343, 375, 412, 441, MGMT 275, 300, MKTG 321

Free Electives: 14

Total Degree Requirements: 120

Bachelor of Science—Athletic Training

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Dimensions of Wellness: FDNT/KHSS/NURS 143

Mathematics: MATH 217

Natural Science: BIOL 104 and 106

Social Science: PSYC 101

Liberal Studies Elective: 3cr, FDNT 145, no course with KHSS prefix

Major: 13-14

Core Requirements:

KHSS 135	Careers in Kinesiology, Health, and Sport	1cr
KHSS 209	Motor Behavior	3cr
KHSS 221	Human Structure and Function <i>or</i>	
<i>or</i> BIOL 150	Human Anatomy	3-4cr
KHSS 343	Physiology of Exercise	3cr
KHSS 441	Psychosocial Implications for Health and Physical Education	3cr

Athletic Training Requirements: 59

KHSS 185	Introduction to Athletic Training	3cr
KHSS 286	Personal Training Practicum	3cr
KHSS 315	Biomechanics	3cr
KHSS 344	Adapted Physical Activity and Sport	3cr
KHSS 345	Survey of Orthopedic Injuries in Sport and Exercise	3cr
KHSS 346	Preventive and Acute Care Skills in Athletic Training	1cr
KHSS 347	Physiology of Exercise Laboratory	1cr
KHSS 365	Orthopedic Injury Assessment in Athletic Training	4cr
KHSS 375	Physiological Basis of Strength Training and Conditioning	3cr
KHSS 376	Athletic Training Clinical Practicum I	3cr
KHSS 377	Athletic Training Clinical Practicum II	3cr

KHSS 380	Organization and Administration in Athletic Training	3cr
KHSS 385	General Medical Conditions in Athletic Training	3cr
KHSS 411	Physical Fitness Appraisal	3cr
KHSS 415	Lifestyle Behavior Management for Physical Activity	3cr
KHSS 446	Therapeutic Modalities	4cr
KHSS 448	Therapeutic Exercise for Athletic Injury Management	4cr
KHSS 476	Athletic Training Clinical Practicum III	3cr
KHSS 477	Athletic Training Clinical Practicum IV	3cr
KHSS 480	Professional Issues in Athletic Training	3cr
Free Electives:		3-4
Total Degree Requirements:		120

Note: All students must obtain an *Athletic Training Program Overview*, available from the KHSS office or the office of the curriculum coordinator, for full details on admission, retention, and program completion requirements.

Bachelor of Science in Education—Health and Physical Education/K-12 Teacher Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	44
Mathematics: MATH 101 or higher (must be approved as Liberal Studies Mathematics courses)	
Natural Science: BIOL 104 and 106 or CHEM 101 and 102	
Social Science: PSYC 101	
Liberal Studies Elective: 3cr, MATH 217, no course with KHSS prefix	
Major: (1)	25
Required Courses:	
KHSS 135 Careers in Kinesiology, Health, and Sport	1cr
KHSS 175 Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209 Motor Behavior	3cr
KHSS 221 Human Structure and Function	3cr
KHSS 261 Water Safety Instruction	1cr
KHSS 315 Biomechanics	3cr
KHSS 341 Evaluation in Health and Physical Education	3cr
KHSS 343 Physiology of Exercise	3cr
KHSS 441 Psychosocial Implications for Health and Physical Education	3cr
KHSS 442 Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr
Professional Requirements:	24
Health and Physical Education Requirements:	
KHSS 213 Recreational Sports and Lifetime Activities	3cr
KHSS 216 Instruction of Fundamental Movement Skills	3cr
KHSS 218 Instruction of Tactical Skills and Fitness Concepts	3cr
KHSS 316 Instruction of Child Health Concepts	3cr
KHSS 318 Preprofessional Experience I	3cr
KHSS 325 School and Community Health	3cr
KHSS 370 Adapted Health and Physical Education	3cr
KHSS 426 Health Science Instruction	3cr
College:	23
Preprofessional Education Requirements:	
ACE 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
Free Electives:		4
(#) Total Degree Requirements:		120
(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.		
(#) See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation.		
(1) Students are required to obtain and keep CPR instructor certification and water safety instructor certification current before student teaching and through graduation.		

Bachelor of Science in Education—Health and Physical Education/Community Health Education

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	44
Mathematics: MATH 101 or higher (must be approved as Liberal Studies Mathematics courses)	
Natural Science: BIOL 104 and 106 or CHEM 101 and 102	
Social Science: PSYC 101	
Liberal Studies Elective: 3cr, MATH 217	
Major:	18
Required Courses:	
KHSS 135 Careers in Kinesiology, Health, and Sport	1cr
KHSS 175 Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209 Motor Behavior	3cr
KHSS 256 Applied Human Structure and Conditioning	3cr
KHSS 341 Evaluation in Health and Physical Education	3cr
KHSS 441 Psychosocial Implications for Health and Physical Education	
KHSS 442 Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr
Professional Requirements:	24
Community Health Education Requirements:	
EDSP 102 Educational Psychology	3cr
HOSP 343 Fund-Raising for Special Events	3cr
KHSS 316 Instruction of Child Health Concepts	3cr
KHSS 318 Preprofessional Experience I	3cr
KHSS 325 School and Community Health	3cr
KHSS 370 Adapted Health and Physical Education	3cr
KHSS 426 Health Science Instruction	3cr
KHSS 450 Curriculum and Programming in Sexuality Education	3cr
KHSS 493 Internship	6cr
Controlled Electives:	9-12
(Must choose one emphasis area from A-G)	
A. Communications (9cr)	
COMM 101 Communications Media in American Society	3cr
COMM 205 Making Presentations with Media	3cr
COMM 230 Global Media and Communication	3cr
B. Nutrition (12cr)	
FDNT 212 Nutrition	3cr
FDNT 213 Life Cycle Nutrition	3cr
FDNT 245 Sports Nutrition	3cr
FDNT 402 Community Nutrition	3cr
C. Physical Activity (12cr)	
FDNT 245 Sports Nutrition	3cr
KHSS 285 Group/Individual Exercise Leadership	3cr
KHSS 350 Health Aspects of Aging	3cr
KHSS 413 Physical Activity and Aging	3cr

D. Aging Populations (12cr)		
KHSS 350	Health Aspects of Aging	3cr
KHSS 413	Physical Activity and Aging	3cr
PSYC 312	Adult Development and Aging	3cr
SOC 357	Sociology of Aging and the Life-course	3cr
E. Human Service (12cr)		
PSYC 330	Social Psychology	3cr
SOC 320	Sociological Theory	3cr
SOC 336	Sociology of the Family	3cr
SOC 391	Foundations of Sociological Practice	3cr
F. Women's Studies (12cr)		
PSYC 379	Psychology of Human Sexuality	3cr
SOC 251	Sociology of Human Sexuality	3cr
SOC 427	Social Perspectives on Intimate Partner Violence	3cr
WGS 200	Introduction to Women's and Gender Studies	3cr
G. Child Studies (9cr)		
SOC 231	Contemporary Social Problems	3cr
SOC 333	Delinquency and Youth	3cr
SOC 428	Child Abuse	3cr
Free Electives:		16-19
Total Degree Requirements:		120

Bachelor of Science in Education—Health and Physical Education/Recreation and Leisure Studies

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	44	
Mathematics: MATH 101 or higher (must be approved as Liberal Studies Mathematics courses)		
Natural Science: BIOL 104 and 106 or CHEM 101 and 102		
Social Science: PSYC 101		
Liberal Studies Elective: 3cr, MATH 217		
Major:	22	
Required Courses:		
KHSS 135	Careers in Kinesiology, Health, and Sport	1cr
KHSS 175	Prevention and Care of Injuries to the Physically Active	2cr
KHSS 209	Motor Behavior	3cr
KHSS 221	Human Structure and Function	3cr
KHSS 261	Water Safety Instruction	1cr
KHSS 341	Evaluation in Health and Physical Education	3cr
KHSS 343	Physiology of Exercise	3cr
KHSS 441	Psychosocial Implications for Health and Physical Education	3cr
KHSS 442	Senior Seminar: Professional Development in Health, Physical Education, and Sport	3cr
Professional Requirements:	27	
Recreation and Leisure Studies Requirements:		
EDSP 102	Educational Psychology	3cr
HOSP 115	Introduction to Tourism	3cr
KHSS 213	Recreational Sports and Lifetime Activities	3cr
KHSS 216	Instruction of Fundamental Movement Skills	3cr
KHSS 218	Instruction of Tactical Skills and Fitness Concepts	3cr
KHSS 318	Preprofessional Experience I	3cr
KHSS 320	Managing Facilities and Events in Sports	3cr
KHSS 370	Adapted Health and Physical Education	3cr
KHSS 493	Internship	3cr
Controlled Electives:	7-9	
Three courses from the following:		
DANC 150 (3), 353, HOSP 343, KHSS 280, 292, 333 (1), 335, 413, 437 (1), 445		
Free Electives:	18-20	
Total Degree Requirements:	120	

Minor—Community Health	18	
Required Courses:	6	
KHSS 325	School and Community Health	3cr
KHSS 417	Contemporary Issues in School and Community Health	
KHSS 420	Health Education and Promotion at the Workplace	

Controlled Electives: (1)	12
Three courses from the following:	
FDNT 212, 402, HOSP 343, KHSS 341, 350, 450, SOC 231, 333, 336	
(1) Only two courses with the same prefix may be used as electives.	

Minor—Sport Management	18	
Required Courses:	12	
KHSS 292	Introduction to Sport Management	3cr
KHSS 320	Managing Facilities and Events in Sports	3cr
KHSS 445	Business Practices in Sport	3cr
KHSS 460	Law and Issues in Managing Sport	3cr
Controlled Electives:	6	
Two courses from the following: ECON 239, KHSS 335, 351, 493		

Certificate—Athletic Coaching	20	
Required Courses:	17	
KHSS 175	Prevention and Care of Injuries to the Physically Active (1)	2cr
KHSS 209	Motor Behavior (1)	3cr
KHSS 333	Psychology of Coaching (1)	3cr
KHSS 335	Athletic Coaching (1)	3cr
KHSS 437	Coaching Disability Sport (1)	3cr
KHSS 493	Internship	
Controlled Elective:	3	
One course from the following: KHSS 221, 256 (1), 292 (1)		
(1) Courses have been designed as distance education courses.		

Certification—Driver Education	12	
Certification in driver education may be added to a valid Pennsylvania Instructional Certificate with the completion of the following:		
KHSS 251	Foundations of Safety and Emergency Health Care (1)	3cr
KHSS 252	Introduction to the Driving Task	3cr
KHSS 353	Driving Education Program Management	3cr
KHSS 354	Application of Driver Education Instructional Modes	3cr
(1) KHSS 251 may be substituted for KHSS 242 in the core curriculum.		

Institute for Rural Health and Safety

Website: www.iup.edu/irhs

Email: IHRS-SAFETY-PROGRAMS@iup.edu

Louis J. Pesci, Director; Jeff Grim, Research Analyst and CTSP Coordinator; Chuck Alias, Director of Emergency Services; Eric Dawkins, Emergency Services Program Coordinator; Tracy Gordish, Secretary

The IUP Institute for Rural Health and Safety (IRHS) brings together university personnel from various disciplines and professional backgrounds to solve problems related to health and safety in rural areas. IRHS includes three centers, the Center for Transportation, the Center for Emergency Services Training, and the Center for Policy and Data Analysis.

Center for Transportation

The Center for Transportation focuses on improving safety through injury prevention by offering teacher certification in safety/driver education, driver training programs, and by coordinating community programs and events that promote safe driving. Injury is the leading cause of death for persons age 1 to 44. Unintentional motor vehicle traffic crashes remain the leading cause of injury death for those age 5 to 24 and the second leading cause of injury death for those age 1 to 4 and 25 and older.

Teacher certification in Safety/Driver Education is the last program of its kind in Pennsylvania that certifies teachers and instructors to teach driver education. The program requires completion of four core courses through cooperative effort with the Department of Kinesiology, Health, and Sport Science.

From **Novice Driver Education** programs for beginning drivers to **Advanced Driver Training** programs in emergency driving techniques, including perceptual driving, the IRHS provides a cadre of courses, all designed to meet the needs of the student.

Community Traffic Safety projects are Community Health Education projects that are federally funded and contracted with the Pennsylvania Department of Transportation's Bureau of Maintenance and Operations. Originating at IUP in 1987, programs and trainings for corporations, schools, civic groups, law enforcement agencies, etc., include topics such as occupant protection, impaired driving, distracted driving, aggressive driving, safe driving near heavy trucks, motorcycles and other vulnerable road users, and safety while walking and bicycling, with emphasis on young drivers and mature drivers.

A secondary focus for the Center for Transportation is on health by reducing obesity and increasing physical activity. According to the National Institutes of Health, obesity and overweight are the second leading causes of preventable death in the US, behind only tobacco use. Center staff teach courses in active transportation planning, complete walkability assessments, and promote walk- and bike-friendly places to foster healthy communities in Pennsylvania.

Center for Emergency Services Training

The Center for Emergency Services Training offers programs designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue. Projects include emergency services training for first responders through a federal Health Resources and Services Administration grant to reduce incidences of morbidity and mortality related to opioid usage in rural areas, and for employees in industrial settings like power plants and coal mines. Two certifications available are Emergency Medical Technician and Paramedic.

The **Emergency Medical Technician** certification is a 150-hour program that requires 3 to 4 months to complete. Each student must complete 10 patient contacts with an authorized emergency medical service agency or authorized hospital or clinic. Both traditional and hybrid courses are offered. Up to 4 transfer credits may be awarded to students searching for hands-on training and work experience while obtaining a degree.

The **Paramedic** certification is a 1,200-hour program including 230 didactic hours, 370 lab hours, a minimum of 250 hours of clinical experience, a minimum of 200 hours of field experience, and a minimum 150-hour capstone field internship. Up to 30 transfer credits may be awarded to students searching for hands-on training and work experience while obtaining a degree.

Center for Policy and Data Analysis

The Center for Policy and Data Analysis focuses on research, surveys, and studies to support the mission of IRHS. Recent projects include an analysis of traffic crashes in Pennsylvania through a grant from the Center for Rural Pennsylvania.

Department of Nursing and Allied Health Professions

Website: www.iup.edu/rn-alliedhealth

Theresa M. Gropelli, Chairperson; Boothby, Calderone, Chunta, Custer, Dusack, Edwards, Gardner, Gerwick, Greenawalt, Hockensmith, Hoffmann, Labant, Little, O'Harra, Ott, Palmer, Poorman, Shanty, Shellenbarger, West, Williams, Zuraikat; and professors emeritae Blair, Holmes, Kresak, Kuzneski, Smatlak, Snyder, Thistlethwaite, Twal

The College of Health and Human Services offers a curriculum leading to the bachelor of science degree program in nursing. Students are admitted to the Nursing program 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 program 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 nursing program. Licensed practical nurse students will fulfill all 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. Prior to graduation, Nursing/Licensed Practical Nurse Track majors must earn a minimum grade of "C" in all required NURS (NURS 211, 212, 213, 214, 236, 312, 316, 330, 331, 332, 333, 336, 337, 412, 431, 432, 433, 434, 436, 437, 440, 450) and BIOL courses. Students earning a D in a NURS course may repeat the course as a prerequisite, corequisite or with permission of chairperson. A grade of "D" in a NURS or BIOL course may hinder progression to the next level of required courses when mastery of the content is essential for success.

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. Changes of major are 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: 44

Mathematics: MATH 217

Natural Science: CHEM 101-102 (CHEM 111/112 could fulfill with permission)

Social Science: PSYC 101, SOC 151 or 161

Liberal Studies Elective: 3cr, PSYC 310, no courses with NURS prefix

Major:	52-55	NURS 437	Adult Health II Clinical	2cr
Required Courses:		NURS 440	Nursing Management Clinical	2cr
NURS 211	Fundamentals I Clinical	NURS 450	A Cognitive Approach to Clinical Problem Solving (2)	3cr
NURS 212	Fundamentals I Theory	NURS 493	Internship	1cr
NURS 213	Fundamentals II Clinical	NURS XXX	Advisor approved NURS elective	3cr
NURS 214	Health Assessment	Adult Health:		
NURS 236	Fundamentals II Theory	NURS 336	Adult Health I	4cr
NURS 312	Professional Nursing	NURS 337	Adult Health Clinical I	5cr
NURS 316	Evidence-Based Practice in Nursing	OR		
NURS 330	Care of the Child and Family	NURS 493	Credits by Exam (3) <i>and</i> Internship	8cr 1cr
NURS 331	Care of the Child and Family Clinical	Maternal Neonatal Health:		
NURS 332	Maternal-Neonatal Health	NURS 330	Care of the Child and Family	2cr
NURS 333	Maternal-Neonatal Clinical	NURS 331	Care of the Child and Family Clinical	2cr
NURS 336	Adult Health I	NURS 332	Maternal-Neonatal Health	2cr
NURS 337	Adult Health I Clinical	NURS 333	Maternal-Neonatal Clinical	2cr
NURS 412	Nursing Management	OR		
NURS 431	Public/Community Nursing Clinical	NURS 493	Credits by Exam (3) <i>and</i> Internship	7cr 1cr
NURS 432	Psychiatric/Mental Health	Other Requirements:		15
NURS 433	Psychiatric/Mental Health Clinical	BIOL 150	Human Anatomy	4cr
NURS 434	Public/Community Nursing	BIOL 240	Human Physiology	4cr
NURS 436	Adult Health II	BIOL 241	Introductory Medical Microbiology	4cr
NURS 437	Adult Health II Clinical	FDNT 212	Nutrition	3cr
NURS 440	Nursing Management Clinical	Free Electives:		9-12
NURS 450	A Cognitive Approach to Clinical Problem Solving (1)	Total Degree Requirements:		120
NURS 493	Internship	(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.		
Other Requirements:	15	(2) Students who achieve a higher score than a specified minimum on a department-required standardized test(s) are exempt from NURS 450. These students would need 12cr of free electives.		
Science Sequence:		(3) Students have the option of earning up to 15cr via examination and taking NURS 493 (up to 2cr) or completing NURS 330, 331, 332, 333, 336, and 337 (17cr). Exam results must be received before students register for any 300- or 400-level nursing courses other than NURS 334.		
BIOL 150	Human Anatomy			
BIOL 240	Human Physiology			
BIOL 241	Introductory Medical Microbiology			
FDNT 212	Nutrition			
Free Electives:	6-9			
(#) Total Degree Requirements:	120			
(*) The Pennsylvania State Board of Nursing requires two units of high school mathematics (one of which is algebra) for admission to the nursing major.				
(1) Students who achieve a higher score than a specified minimum on a department-required standardized test(s) are exempt from NURS 450. These students would need 9cr of free electives.				
(#) See advisory paragraph "Timely Completion of Degree Requirements" in the section on Requirements for Graduation.				

Bachelor of Science—Nursing/Licensed Practical Nurse Track (1)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	43
Dimensions of Wellness: Fulfilled by the major	
Mathematics: MATH 217	
Natural Science: CHEM 101-102 (CHEM 111/112 could fulfill with permission)	
Social Science: PSYC 101, SOC 151 or 161	
Liberal Studies Electives: 5cr, PSYC 310, no course with NURS prefix	

Major:	50-53	
Required Courses:		
NURS 214	Health Assessment	3cr
NURS 312	Professional Nursing	2cr
NURS 316	Evidence-Based Practice in Nursing	3cr
NURS 334	Transitions in Professional Nursing	3cr
NURS 412	Nursing Management	2cr
NURS 431	Public/Community Nursing Clinical	2cr
NURS 432	Psychiatric/Mental Health	2cr
NURS 433	Psychiatric/Mental Health Clinical	2cr
NURS 434	Public/Community Nursing	2cr
NURS 436	Adult Health II	4cr

Allied Health Professions Programs

Joyce A. Shanty, Coordinator

Respiratory Care

The bachelor of science degree program 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.

The program is accredited by the Commission on Accreditation for Respiratory Care. The program consists of two academic years of preclinical studies (61 credits) on the Indiana campus and two academic years (59 credits) of clinical study at the IUP Northpointe Regional Campus. 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 program in respiratory care is offered for certified respiratory therapists (CRTs) who are graduates of an accredited certificate or associate degree respiratory care program. CRT students may 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 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.

Bachelor of Science—Respiratory Care

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44-45

Mathematics: MATH 105 or higher level

Natural Science: CHEM 101-102

Social Science: PSYC 101, SOC 151 or 161, global and multicultural awareness course

Writing Intensive: not required

Liberal Studies Elective: 3cr, 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: 12

Science Courses:

BIOL 150	Human Anatomy	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr

Free Electives: 4-5

Total Degree Requirements: (1) 120

- (1) RESP 300- and 400- level courses are completed at IUP Northpointe Regional Campus.

Bachelor of Science—Respiratory Care/Certified Respiratory Therapist Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: 3cr

Natural Science: CHEM 101-102

Writing Intensive: not required

Liberal Studies Elective: 3cr, no courses with RESP prefix

Major: 60

RESP credits via articulation (1) 33cr

Required Courses: (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: 16

Total Degree Requirements: 120

- (1) Students in this track may be exempt from the 100- and 300-level courses in the Respiratory Care program and may receive 33cr via articulation.
- (2) RESP 400-level courses are completed at IUP Northpointe Regional Campus.

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 programs of study, 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: UPMC Altoona Regional Health System, Altoona; Children's Hospital Medical Center, Akron, Ohio; Memorial Medical Center, Johnstown; Pennsylvania General College of 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, New York; 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: 44

Mathematics: MATH 217

Natural Science: CHEM 111-112

Writing Intensive: One required

Liberal Studies Elective: 3cr, PHYS 111, no course 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: 40

BIOL 150	Human Anatomy	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology <i>or</i>	
<i>or</i> 250	Principles of Microbiology	4cr
BIOL 364	Immunology	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 325	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: 4

(#) 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 12 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 Indiana 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), Pittsburgh. 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: 50

Mathematics: MATH 105

Natural Science: CHEM 101-102

Social Science: PSYC 101, SOC 151 or 161

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 Nonimaging	1cr
NMDT 432	Radiopharmaceuticals	3cr
NMDT 433	Introduction to Tomographic Imaging	1cr
NMDT 434	Clinical Nuclear Medicine	16cr

Other Requirements: (2) 20

BIOL 150	Human Anatomy	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
ENGL 310	Public Speaking <i>or</i>	
<i>or</i> BCOM 321	Business Communication	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

Free Electives: (3) 18

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 12 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 Liberal Studies program requirements. Applications are available at 244 Johnson Hall. For information, call 724-357-7647.

Gerontology Certificate Program 21

Core Courses: 9

KHSS 350	Health Aspects of Aging	3cr
PSYC 312	Adult Development and Aging	3cr
SOC 357	Sociology of Aging and the Life-course	3cr

Controlled Electives:	9	PHYS 121	Physics I Lab	1cr
9cr from the following: ANTH 444, CDFR 428, FCSE 315,	9cr	PHYS 122	Physics II Lab	1cr
GERN 281, 481, 482, KHSS 413, MGMT 300, 311, PHIL 122, 240,		Business Electives: Two 3cr courses from the following:		6cr
PSYC 376, 378, RHAB 312, SAFE 380, SOC 336, 342, 345, 452,		ACCT 200, MGMT 300, 310, 311, 434		
FDNT 410		Free Electives:		0-6
Other Requirements:	3	Total Degree Requirements:		120
Internship (GERN 493 or internship in student's major)	3cr			

Department of Safety Sciences

Website: www.iup.edu/safetysciences

Tracey Cekada, Chairperson; Ferguson, Janicak, Marin, Minnick, Nelson, Paschold, Rhodes, Wachter, Zreiqat; and professors emeriti McClay, Pacalo, Soule

The department offers a minor and a Bachelor of Science degree program with a major in safety, health, and environmental applied sciences with a focus on occupational exposures. The program in safety, health, and environmental applied sciences prepares the students 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, health, and environmental professionals. As a minimum, the curriculum includes a major of 52 credits in safety, health, and environmental applied sciences. The BS with a major in safety, health, and environmental applied sciences is accredited by the Applied and Natural Science Accreditation Commission of ABET, <http://www.abet.org>.

Bachelor of Science—Safety, Health, and Environmental Applied Sciences

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 105

Natural Science: CHEM 101-102

Social Science: PSYC 101, global and multicultural awareness course

Liberal Studies Elective: 3cr, MATH 217

Major: 52-58

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	3cr
SAFE 212	Hazard Prevention Management I	3cr
SAFE 215	Safety, Health, and Environmental Communications	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr
SAFE 310	Environmental Safety and Health Regulations and Sustainability	3cr
SAFE 311	Fire Protection	3cr
SAFE 330	Recognition, Evaluation, and Control of Occupational Health Hazards I	4cr
SAFE 335	Industrial and Environmental Stressors	2cr
SAFE 345	Process and Systems Safety	3cr
SAFE 347	Ergonomics	3cr
SAFE 361	Air and Water Pollution	2cr
SAFE 412	Hazard Prevention Management II	3cr
SAFE 430	Recognition, Evaluation, and Control of Occupational Health Hazards II	4cr
SAFE 435	Ethics and Professionalism	1cr
SAFE 488/493	Internship	6-12cr

Other Requirements: 18

Additional Science and Mathematics:

BIOL 104	Human Biology: How the Human Body	
or 155	Works or Human Physiology and Anatomy	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 112	Physics II Lecture	3cr

The minor consists of 18 credits in safety, health, and environmental applied sciences courses as identified below. The minor has improved job opportunities for students in environmental geoscience, criminology, human resource management, international business, and management.

Minor—Safety, Health, and Environmental Applied Sciences 18

Required Courses:

SAFE 101	Introduction to Occupational Safety and Health	3cr
SAFE 111	Principles of Safety I—General Industry	3cr
SAFE 220	Hazardous Materials and Emergency Management	3cr
SAFE 310	Environmental Safety and Health Regulations and Sustainability	3cr

Controlled Electives:

SAFE courses approved by department chair totaling at least 6cr with at least 3cr being in 300-level or higher course(s)	6cr
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Certificate—Shale, Gas, and Energy 18

Required Geoscience Courses: 6

GEOS 119	Geology of Energy Resources (1)	3cr
GEOS 409	Geology of Shale Gas Field Workshop	3cr

Required Geography Courses: 6

GEOG 109	Geographic Information Science and Systems for Energy Applications (1)	3cr
GEOG 409	Spatial Analysis Applications in the Energy Sectors Workshop	3cr

Required Safety Science Courses: 6

SAFE 104	Introduction to Safety in the Natural Gas Industry (1)	3cr
SAFE 204	Principles of Safety in the Natural Gas Industry	3cr

(1) With departmental permission, one 100-level introductory course may be substituted by an appropriate upper-division course.

The College of Humanities and Social Sciences

Yaw A. Asamoah, Dean

Dorothy M. Gracey, Associate Dean

Tanya Heflin, Dean's Associate

Website: 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.

College Majors

Anthropology	Public Health (Environmental and Occupational Health, Behavioral and Mental Health, Epidemiology and Biostatistics)
Asian Studies	Regional Planning
Economics	Religious Studies
English	Social Science Education
English Education	Social Studies Education/History
Geography	Sociology
History	Spanish
International Studies/Political Science	Spanish Education K-12
Journalism and Public Relations	
Philosophy	
Political Science	

College Minors

Anthropology	Lesbian, Gay, Bisexual, Transgender, and Queer Studies
Asian Studies	Pan-African Studies
Child and Adult Advocacy Studies (CAAST)	Philosophy
Economics	Political Science
English	Pre-law Interdisciplinary
French	Regional Planning
German	Religious Studies
Geography	Sociology/Applied Social Research
Global Health	Sociology/General Sociology
History	Sociology/Human Services
Homeland Security	Sociology of Disability Services
International Studies	Sustainability Studies
Journalism and Public Relations	Spanish
Latin American Studies	Women's and Gender Studies

Degrees

The departments of Anthropology, Economics, English, Foreign Languages, Geography and Regional Planning, History, Journalism and Public Relations, Philosophy, Political Science, Religious Studies, and Sociology and the Asian Studies Committee offer work leading to a bachelor of arts degree. The bachelor of science degree is offered in regional planning and public health. The bachelor of science in education is offered in English, 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.

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.

Pre-law Interdisciplinary Minor

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Seven courses, including at least one from each of the areas (no courses with student's major prefix):

<i>Business:</i>	ACCT 201, ACCT 202, BLAW 235
<i>Criminology:</i>	CRIM 210, 215, 225, 255
<i>Economics:</i>	ECON 121, 122, 332
<i>English:</i>	ENGL 212, 227, 265, 310, 321
<i>History:</i>	HIST 320, 341, 342, 346, 475
<i>Philosophy:</i>	PHIL 101, 122, 130, 221, 270, 320, 450
<i>Political Science:</i>	PLSC 358, 359, 361, 405

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 course work 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.

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 his/her 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.

College Foreign Language Requirements

Students whose primary major is in the College of Humanities and Social Sciences must complete up through the 12th credit of a foreign language sequence. They may choose any of the languages offered, including the self-instruction in the Critical Languages program. Some courses taught in the traditional format (Chinese, French, German, Japanese, Spanish) also count toward Liberal Studies electives. Courses in American Sign Language and computer languages do not count toward the college language requirement.

For students with previous foreign language instruction or experience, individual placement into foreign language courses may be done during placement testing and registration before the first semester at IUP. Students may also take a placement exam before, but not after, beginning course work in a particular language. Students who place into classes beyond the 12th credit within a foreign language are considered to have met the language requirement. Students who place beyond the introductory course, but not beyond the 12th credit, are only required to complete through the 12th credit. For example, the first courses in the Spanish curriculum are three 4-credit classes: SPAN 101, 102, and 201. A student who places into SPAN 102 would only need to pass SPAN 102 and 201 in order to meet the 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 undergraduate international 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. Also, any student with a secondary major in the college whose primary major does not require foreign language does not need to complete the college-level requirement.

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 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 audio cassettes. 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, Dutch, Finnish, Modern Greek, Hebrew, Hindi, Hungarian, Korean, Portuguese, Russian, Swahili, and Swedish.

Internship Programs

Humanities and Social Sciences departments encourage internship programs that allow students to engage in supervised experiences in a work setting related to their personal career goals, giving them the benefits of mentoring and coaching from professionals in the discipline. Students have completed internships in a number of settings, from legislative offices in Harrisburg and Washington, DC, to offices at the county level including county planning and development offices and children and youth services, Common Pleas Court to human services agencies such as Head Start and from Lifesteps. When completed for academic credit, students will complete a project and/or a final paper that is approved by a faculty internship supervisor. For more information about specific internship programs, students should consult with the chairperson of the department in which the student is majoring/minoring.

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 Department of Foreign Languages 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 4 transfer credits in Spanish from the UNA. For details and brochures, contact the Department of Foreign Languages.

IUP at Mexico Summer Program: The Department of Foreign Languages 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 Department of Foreign Languages.

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 Department of Foreign Languages.

IUP at Valladolid: Through the Department of Foreign Languages, the university has offered a spring semester of study at the University of Valladolid, Spain, for more than 40 years. The participants live in private homes. For details, contact the Department of Foreign Languages.

Committee of Asian Studies

Alan T. Baumler, Coordinator

The Committee of Asian Studies offers an interdisciplinary 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. 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 public relations, and teaching.

To complete the Asian studies major, a student must take a minimum of 33 credits in courses dealing with Asia. 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 23 credits must come from Category A; no more than 3 credits may come from Category B. It is highly recommended that students 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 and public relations, political science, or religious studies.

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); 3 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

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: 3cr

Liberal Studies Elective: 3cr, no courses with CHIN or JAPN prefixes

Major: 33-34

Required Course: 3cr

ASIA 200 Introduction to Asian Studies

Controlled Electives: (1) 30cr

Intermediate Asian language: (2) 0-4cr

CHIN 201 Intermediate Chinese 4cr

CRLG 251 Arabic IV 3cr

CRLG 255 Hindi IV 3cr

CRLG 259 Korean IV 3cr

CRLG 264 Hebrew IV 3cr

JAPN 201 Intermediate Japanese 4cr

Category A: Exclusively Asia-Focused: (3, 4) 24-30cr

At least 24cr earned through the following courses:

ANTH 272 Cultural Area Studies: China 3cr

ANTH 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
ARHI 427	Japanese Narrative Art	3cr
GEOG 256	Geography of East and Southeast Asia	3cr
GEOG 257	Geography of South and Southwest Asia	3cr
HIST 206	The 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
HIST 338	The History of Iran	3cr
HIST 433	China 1300-1800: The Late Imperial Age	3cr
HIST 434	Modern China 1800-present	3cr
HIST 436	Japan 1500-1850: Early Modern Japan	3cr
PLSC 383	Political Systems: Asia	3cr
PLSC 384	Political Systems: Middle East	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

Category B: Substantially Asia-Focused (3, 4, 5) 0-3cr

ARHI 321	History of World Ceramics	3cr
BCOM 342	Intercultural Business Communication	3cr
ECON 339	Economic Development I	3cr
ENGL/FNLG 396	The Literature of Emerging Nations	3cr
GEOG 104	World Geography: Global Context	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

Free Electives: 42-44

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 3cr in intermediate language instruction. Such credits in these cases are to be replaced by taking one additional Category A class. 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) Unless given special permission by the Asian Studies Committee, no more than 9cr of courses with the same departmental prefix may count toward the major.
- (4) The subject matter varies in rotating topic courses (e.g., ENGL 344, 397, 398, or 399; HIST 497; 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, 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

CHIN 101/102/201/202 Chinese I, II, III, IV
CRLG 101/151/201/251 Arabic 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

BCOM 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 497 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 toward 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 toward 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.

Asian Studies Honors Track

The honors program is open by permission of the Asian Studies Committee to Asian Studies majors with a minimum 3.25 cumulative GPA and a 3.5 GPA in Asian Studies courses. Students complete 36 credits in Asian Studies (instead of the normal 33) including two semesters of honors thesis research and writing. Honors theses are completed individually under the direction of a professor who specializes in the student's area of interest and are approved by a thesis committee comprising the coordinator and two other readers, one of whom may come from outside the program.

Students interested in the Asian Studies 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 course work is designated on university transcripts; students completing the honors program are recognized at commencement ceremonies.

Asian Studies Honors Track 9

Three additional credits in Asian Studies	3cr
ASIA 483 Honors Thesis (1)	6cr

- (1) Two semesters, 3cr each.

Certificate in China Studies

The China Studies Certificate is a 15-credit program that allows students to pursue studies that focus on one or more disciplinary areas focused on China. Students who wish to pursue graduate-level studies and/or a career in a China-related field may want to add this credential to their main academic preparation. Others who have an interest in Chinese society and culture can also benefit from this certificate.

Certificate—China Studies (1, 2, 3, 4) 15

Core Courses: Primarily China-Focused Courses: (2)	12-15
ANTH 272 Cultural Area Studies: China	3cr
ANTH 333 The Archaeology of Early China	3cr
ARHI 425 Arts of China	3cr
CHIN Chinese Language Courses (5)	4cr
HIST 332 History of Early China	3cr
HIST 433 China 1300-1800: The Late Imperial Age	3cr
HIST 434 Modern China 1800-present	3cr

Electives: East Asia-Focused Courses: 0-3
 GEOG 256, HIST 206, PLSC 383, RLST 220, 311, 370

- (1) Courses need to be in at least two different prefixes.
- (2) The topics in such courses as ENGL 399 Major Global Authors, HIST 497 Topics in Non-Western History, and ITST 281 Special Topics in Non-Western Studies vary (check with instructor). When concerned with China or East Asia, these courses can count toward the certificate with the approval of Asian Studies Coordinator.
- (3) Three credits of an appropriate internship can count towards the certificate with the approval of the Asian Studies Coordinator.
- (4) No more than 6 transfer credits may be counted towards the certificate.
- (5) No more than 3cr from an appropriate language class may be counted toward the certificate.

Certificate in Japan Studies

The Japan Studies Certificate is a 15-credit program that allows students to pursue studies that focus on one or more disciplinary areas focused on Japan. Students who wish to pursue graduate-level studies and/or a career in a Japan-related field may want to add this credential to their main academic preparation. Others who have an interest in Japanese society and culture can also benefit from this certificate.

Certificate—Japan Studies (1, 2, 3, 4) **15**

Core Courses: Primarily Japan-Focused Courses: (2)		12-15
ARHI 423	Art of Japan	3cr
ARHI 427	Japanese Narrative Art	3cr
HIST 436	Japan 1500-1850: Early Modern Japan	3cr
HIST 437	Modern Japan 1850-present	3cr
JAPN	Japanese Language Courses (5)	4cr
RLST 220	Buddhism	3cr
RLST 373	Advanced Studies in Buddhism	3cr

Electives: East Asia-Focused Courses: 0-3
 GEOG 256, HIST 206, PLSC 383, RLST 311, 370

- (1) Courses need to be in at least two different prefixes.
- (2) The topics in such courses as ENGL 399 Major Global Authors, HIST 497 Topics in Non-Western History, and ITST 281 Special Topics in Non-Western Studies vary (check with instructor). When concerned with Japan or East Asia, these courses can count toward the certificate with the approval of the Asian Studies Coordinator.
- (3) Three credits of an appropriate internship can count towards the certificate with the approval of the Asian Studies Coordinator.
- (4) No more than 6 transfer credits may be counted towards the certificate.
- (5) No more than 3cr from an appropriate language class may be counted toward the certificate.

Certificate in Middle Eastern Studies

The Middle Eastern Studies Certificate is a 15-credit program that allows students to pursue studies that focus on one or more disciplinary areas focused on the Middle East. Students who wish to pursue graduate-level studies and/or a career in a Middle Eastern-related field may want to add this credential to their main academic preparation. Others who have an interest in Middle Eastern society and culture can also benefit from this certificate.

Certificate—Middle Eastern Studies (1, 2, 3, 4) **15**

Required Courses: (2)		15
HIST 207	History of the Middle East	
HIST 330	History of the Islamic Civilization	3cr
HIST 331	Modern Middle East	3cr
HIST 338	The History of Iran	3cr
HIST/PLSC 339	Jihad and the Origins of Islamist Movements in the Middle East	3cr
PLSC 384	Political Systems: Middle East	3cr
RLST 380	Islam	3cr

- (1) Courses need to be in at least two different prefixes.
- (2) The topics in such courses as ENGL 399 Major Global Authors, HIST 497 Topics in Non-Western History, and ITST 281 Special Topics in Non-Western Studies vary (check with instructor). When concerned with Middle East, these courses can count toward the certificate with the approval of Asian Studies Coordinator.
- (3) Three credits of an appropriate internship can count towards the certificate with the approval of the Asian Studies Coordinator.
- (4) No more than 6 transfer credits may be counted towards the certificate.
- (5) No more than 3cr from an appropriate language class may be counted towards the certificate.

Bachelor of Science—Public Health

The Bachelor of Science with a major in Public Health will graduate students who will help meet Pennsylvania's workforce needs in public health and health care related fields, and will help meet the strong demand for trained public health professionals projected by national and regional studies. This degree will prepare students for jobs in health administration, community health, and health education. Upon completion of the program, students will understand the science of human physical and mental health, the epidemiology of infectious and chronic diseases, as well as the complications of the US and global health care systems with regard to access and ethics of the disparities in health care delivery. The program offers three concentrations: **Environmental and Occupational Health, Behavioral and Mental Health, and Epidemiology and Biostatistics.**

Bachelor of Science—Public Health/Environmental and Occupational Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 217

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core: 30-33

BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr

Concentration: Environmental and Occupational Health 23
 BIOL 221, 323; CHEM 101, 102; SAFE 330 or 430, 335, 361

Free Electives: (1) 17-21

Total Degree Requirements: 120

- (1) Minor or certificate recommended.

Bachelor of Science—Public Health/Behavioral and Mental Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 217

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core:	30-33
BIOL 301 Fundamentals of Epidemiology	3cr
ECON 360 Health Economics	3cr
GEOG/ RGPL 316 Introduction to Geographic Information Systems	3cr
NURS 410 Health Promotion and Social Issues	3cr
NURS 455 Health Care Informatics	3cr
NURS/ELR 314 Health Policy and Law	3cr
PUBH 122 Foundations of Public Health	3cr
PUBH 306 Research Design and Analysis in Public Health	3cr
PUBH 493 Internship in Public Health	3-6cr
SOC 442 Medical Sociology	3cr

Concentration: Behavioral and Mental Health 18
 PSYC 332 and 374; SOC 361 or 362 or 363; SOC 448 and 2 electives

Free Electives: (1) 22-26

Total Degree Requirements: 120

(1) Minor or certificate recommended.

Bachelor of Science—Public Health/Epidemiology and Biostatistics Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 121

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151

Liberal Studies Electives: ECON 122, FDNT 145

Public Health Core:	30-33
BIOL 301 Fundamentals of Epidemiology	3cr
ECON 360 Health Economics	3cr
GEOG/ RGPL 316 Introduction to Geographic Information Systems	3cr
NURS 410 Health Promotion and Social Issues	3cr
NURS 455 Health Care Informatics	3cr
NURS/ELR 314 Health Policy and Law	3cr
PUBH 122 Foundations of Public Health	3cr
PUBH 306 Research Design and Analysis in Public Health	3cr
PUBH 493 Internship in Public Health	3-6cr
SOC 442 Medical Sociology	3cr

Concentration: Epidemiology and Biostatistics 23
 CHEM 101, 102; FDNT 422; KHSS 472; MATH 216, 411, 412

Free Electives: (1) 17-21

Total Degree Requirements: 120

(1) Minor or certificate recommended.

Child and Adult Advocacy Studies (CAAST)

Child and Adult Advocacy Studies is an 18-credit interdisciplinary undergraduate minor. It is designed for current undergraduate students enrolled at IUP. It provides mandated reporters and first responders in criminology, education, family studies, medicine, nursing, psychology, public health, sociology, social work, and other disciplines with evidence-based, culturally relevant knowledge and skills to improve the outcomes for victims and perpetrators of interpersonal violence across the lifespan. A student's major determines which CAAST minor s/he pursues: one minor has been designed for Psychology majors, one minor has been designed for Sociology majors, and one minor has been designed for all other majors.

Minor—Child and Adult Advocacy Studies (CAAST) for Sociology/Human Services Track majors (1, 2, 3) 18

Required Courses:

PSYC 101 General Psychology	*cr (4)
PSYC 313 Non-normative Development in Adulthood <i>or</i> 314 <i>or</i> Child and Adolescent Psychopathology	3cr
PSYC 322 Violence Across the Life Span	3cr
PSYC 332 Community Psychology and Prevention Science	3cr
PSYC 380 Gender and Violence	3cr
SOC 151 Principles of Sociology <i>or</i> <i>or</i> 161 Foundations of Sociology: Social Relations in Groups and Organizations	*cr (4)

Controlled Electives:

Two courses from the following: SOC 357, 427, 428 6cr

- (1) Students majoring in Psychology are not eligible to take this minor; instead, they must take the CAAST minor that has been designed for students pursuing a major in Psychology.
- (2) Students who are Sociology/Human Services Track majors can only have two SOC courses that count for their major and the CAAST minor.
- (3) Sociology/General Track majors who wish to get a CAAST minor must take SOC 391 and 392 as part of their free electives.
- (4) Credits counted in Liberal Studies, not in the minor.

Minor—Child and Adult Advocacy Studies (CAAST) for Psychology majors (1, 2) 18

Required Courses:

PSYC 101 General Psychology	*cr (3)
PSYC 322 Violence Across the Life Span	3cr
SOC 151 Principles of Sociology <i>or</i> <i>or</i> 161 Foundations of Sociology: Social Relations in Groups and Organizations	*cr (3)
SOC 391 Foundations of Sociological Practice	3cr
SOC 392 Clinical Sociological Practice	3cr

Controlled Electives:

One additional PSYC course from the following: 3cr

PSYC 313, 314, 332, 380, 493

Two additional SOC courses from the following: 6cr

SOC 357, 427, 428

- (1) Students majoring in Sociology/Human Services Track are not eligible to take this minor; instead, they must take the CAAST minor that has been designed for students pursuing a major in Sociology/Human Services Track.
- (2) Students who are Psychology majors can only have two PSYC courses that count for their major and the CAAST minor.
- (3) Credits counted in Liberal Studies, not in the minor.

Minor—Child and Adult Advocacy Studies (CAAST) for majors other than Psychology and Sociology 18

Required Courses:

PSYC 101 General Psychology	*cr (1)
PSYC 322 Violence Across the Life Span	3cr
SOC 151 Principles of Sociology <i>or</i> <i>or</i> 161 Foundations of Sociology: Social Relations in Groups and Organizations	*cr (1)
SOC 391 Foundations of Sociological Practice	3cr
SOC 392 Clinical Sociological Practice	3cr

Controlled Electives: (2)

Three additional courses from the following: 9cr

PSYC 313 *or* 314, 332, 380, SOC 357, 427, 428

- (1) Credits counted in Liberal Studies, not in the minor.
- (2) With the aid of a CAAST minor advisor, students will select classes
 - (a) from both PSYC and SOC, and (b) that will cover the spectrum of violence across the lifespan.

Certificate in Child and Adult Advocacy Studies (CAAST)

The CAAST Certificate is a 12-credit interdisciplinary program designed for individuals who are already working in professional environments and are seeking additional training/knowledge relevant to their work. It provides mandated reporters and first responders in child protection, child advocacy, criminal justice, domestic violence, education, medicine, nursing, older adult protective services, older adult advocacy, psychology, sociology, social work, and other disciplines with evidence-based, culturally relevant knowledge and skills to improve the outcomes for victims and perpetrators of interpersonal violence across the lifespan.

Certificate—Child and Adult Advocacy Studies (CAAST) 12

Prerequisite: Program Coordinator(s) approval

Required Course:	3
PSYC 322 Violence Across the Life Span	3cr
Controlled Electives:	9
One additional PSYC course from the following: PSYC 313, 314, 332, 380	3cr
Two additional SOC courses from the following: SOC 357, 427, 428	6cr

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally or even more important than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major course work minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The course work of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20

Required Courses:	12
COMM 261 Teamwork and Communication Skills for College and Career (1)	3cr
LDSP 361 Introduction to Leadership	3cr

SOC 161	Foundations of Sociology: Social Relations in Groups and Organizations (2, 3)	3cr
THTR 161	Introduction to Theater: Interpersonal Practices (4)	3cr

Interdisciplinary Teamwork Course: (5) 3-4

One course approved as a Teamwork-Intensive section (T-Course) course. 3-4cr

Capstone Courses: (6) 2-3

TMWK 461	Teamwork and Communication in Research (7)	1cr
And one to two credits of independent study, honors thesis, or undergraduate research (8)		1-2cr

- (1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.
- (2) SOC 161 counts toward the Liberal Studies Social Science requirement.
- (3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.
- (4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.
- (5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.
- (6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches:
 - 1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or
 - 2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.
- (7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.
- (8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.

Global Health Minor

Global health is “an area for study, research, and practice that places a priority on improving health and achieving health equity for all people worldwide.” The Global Health minor will equip students interested in health and medicine with the analytical and critical-thinking skills needed to understand, explain, and critique health inequalities. They will recognize how these health disparities result from globalization and the need for promoting health equity in areas of the world with under-resourced and constrained health care. The minor is organized around six global health pathways: (1) food, nutrition, and hunger; (2) environmental justice; (3) law, ethics, and policy; (4) disaster, conflict, and displacement; (5) gender, sexuality, and reproductive health; and (6) aging. Students will select one of the six pathways and will complete 12 credits in the selected pathway, in addition to Introduction to Global Health and either Medical Anthropology or Medical Sociology.

Health topics, theories, and research methods as addressed in the social sciences will advance students' interdisciplinary understandings of health disparities, with a corresponding awareness of health equity. Practicums, through field school participation, internships, and other experiential learning opportunities, will merge course material with real world praxis, and will provide students with greater insights into global health and its contributions. The Global Health minor will prepare students for graduate studies in health-related fields and careers in health-promoting governmental agencies and non-governmental organizations (NGOs). Ethnographic field school, independent study courses, and internship courses may be applied to each global health pathway with the approval of the Global Health minor committee. Students should consult with the program coordinator to determine if there are any prerequisites for the courses listed below. The program coordinator will work with individual departments to determine if students may qualify for prerequisite exemptions. Course substitutions will be permitted with the approval of the Global Health minor committee.

Minor—Global Health (2, 5) 18**Core Courses: 6**

ANTH 240	Introduction to Global Health	3cr
AHTH 444	Medical Anthropology <i>or</i>	3cr
<i>or</i> SOC 442	Medical Sociology	3cr

Select one Global Health Pathway 12**Food, Nutrition, and Hunger (7 courses, choose 4) (3, 4)**

At least one course must have a FDNT prefix.

The courses in this pathway offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine world needs associated with food, nutrition, and health.

ANTH 430, ECON 360, 362, FDNT 143 (1) *or* NURS 143 (1), FDNT 415, 470, SOC 337

Environmental Justice (7 courses, choose 4) (3, 4)

The courses in this pathway offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine the linkages between environmental issues in the world and health.

ANTH 420, BIOL 221, ECON 362, FDNT 415, GEOG/RGPL 343, PHIL 270, SOC 417

Law, Ethics, and Policy (9 courses, choose 4) (3, 4)

The courses in this pathway will allow students to learn about using law and ethics to develop and advocate for legislation and policies designed to address social injustice and improve health in the world.

ANTH 352, 360, ECON 360, 362, NURS/ELR 314, PHIL 130, PLSC 405, SOC 362, 452

Disasters, Conflicts, and Displacement (6 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective to examine natural disasters and armed conflicts that result in displacement and poor health in many parts of the globe.

ANTH 352, 370, NURS 102, PSYC 378, RGPL 103, SOC 337

Gender, Sexuality, and Reproductive Health (10 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine gender, sexuality and related health issues as well as reproductive health knowledge and services in the world.

ANTH 250, BIOL 117, ENGL 336, KHSS 143 (1), LGBT 200, PLSC 405, PSYC 379, SOC 251, 363, 410

Aging (8 courses, choose 4) (3, 4)

The courses in this pathway will offer the students an interdisciplinary perspective that will provide students with the analytical tools to examine fundamentals of global aging and health.

ANTH 340, ECON 362, FDNT 410, KHSS 350, PSYC 312, 378, SOC 357, 452

- (1) Only one 143 Liberal Studies class may be taken in a student's entire program.
- (2) At least six credits in the selected pathway must be at the 300 level or above.
- (3) Only one 100-level course may count in the selected pathway.
- (4) Only two courses in the selected pathway may come from the student's major.
- (5) With the exception of GLOB courses, no course prefix may be used more than twice without written permission from the program director.

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 people 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 toward 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 that 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 that 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
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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	International Development Strategies	3cr
SPAN 244	Modern Mexico	3cr
SPAN 260	Introduction to Hispanic Literature	3cr
SPAN 340	Hispanic Civilization through the 19th Century	3cr
SPAN 344	Spanish-American Cultures from the 19th Century to the Present	3cr
SPAN 364	Survey of Spanish-American Literature	3cr
SPAN 420	Modern Hispanic Theater	3cr
SPAN 421	Modern Hispanic Short Story	3cr
SPAN 430	20th-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 toward the Latin American Studies minor.
- (2) With the program coordinator's approval, 3cr of an internship (LAS 493) may be counted toward 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.

Lesbian, Gay, Bisexual, Transgender, and Queer (LGBT&Q) Studies Minor

The Lesbian, Gay, Bisexual, Transgender, and Queer (LGBT&Q) Studies minor provides students the opportunity to critically analyze influences on and of sexualities, sexual and gender identity formation, and experiences in various social contexts, with a focus on sexual minorities and on preparing students to live and work in a pluralistic society. This interdisciplinary minor includes courses from a variety of disciplines, including sociology, anthropology, psychology, English, health education, child development and family relations. Students will examine diversity in sexual and gender identities, and the intersections of sexualities and gender with other identities including race, religion, and social class. Students also explore institutional influences, including family, politics, labor force and economics, religion, education, health care, media, arts, and sciences and the local, national, and global discourse on sexualities and gender identities. The curriculum additionally includes critical examination of the formation and effects of public policies on individuals and communities of differing sexual and gender identities, analysis of representations, and the discourses on sexualities as expressed through language, literature, and the arts, as well as the policies and practices of social institutions such as health care, religion, politics, education, and sports, among others.

Minor—Lesbian, Gay, Bisexual, Transgender, and Queer (LGBT&Q) Studies 18

Required Course:	3
LGBT 200 Introduction to Lesbian, Gay, Bisexual, Transgender, and Queer Studies	3cr
Controlled Electives:	15
Five courses from the following, two of which must be 300 level or higher: (1)	
ANTH 350, 352, CDFR 224, 323, ENGL 350, KHSS 450, LGBT 400, PLSC 405, PSYC 379, SOC 251	

- (1) Other relevant courses may serve as an elective with permission of the LGBT&Q Studies coordinator.

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 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 people of African heritage. A Pan-African Studies minor is thus valuable in an increasingly diverse society and attractive to employers and graduate schools alike.

Students must complete 18 credits to earn a minor in Pan-African studies. In addition to the one required course PNAF 131, at least three courses (9 credits) must come from Category A: Exclusively Pan-African-Focused courses. The remaining courses may come from either Category A or Category B: Substantially Pan-African-Focused courses. Because their content may vary, courses from Category B must be approved by the coordinator of Pan-African Studies to count for the minor. In addition, special topics, independent study, study abroad, and internship courses may be applied to either category with the approval of the program coordinator.

Minor—Pan-African Studies (*) 18

Required Course:	3
PNAF 131 Introduction to Pan-African Studies	3cr
Category A: Exclusively Pan-African Focused:	9-15
ANTH/SOC 271 Cultural Area Studies: Africa	3cr
ARHI 418 African Art	3cr
COMM 380 The History of African Americans in Film	3cr
ECON 338 Poverty in Africa	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 365 History of Black America since Emancipation	3cr
HIST 366 African-American Women	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

Category B: Substantially Pan-African Focused: (1)	0-6
CRLG 165 Swahili II	3cr
CRLG 215 Swahili III	3cr
ECON 339 Economic Development I	
ENGL 396 The Literature of Emerging Nations	3cr
ENGL 398 Global Genres	3cr
JRNL 375 World News Coverage International	3cr
PLSC 389 Development Strategies	3cr
PLSC 404 Women and Politics	3cr
RLST 380 Islam	3cr
SOC 362 Racial and Ethnic Minorities	3cr

- (*) No more than 6cr taken for the minor may also count for the student's major.
- (1) Because their content may vary, courses from Category B must be approved by the Pan-African Studies coordinator in order to count for the minor.

For further information on this minor, contact the College of Humanities and Social Sciences, 201 McElhane Hall, 724-357-2280.

Sustainability Studies Minor

The Sustainability Studies minor is an interdisciplinary program that draws from expertise across the university. The program conceptualizes “sustainability” as an interdisciplinary approach to knowledge production and action that focuses on “the health and integrity of human societies and the natural world.” Sustainability is classically defined as a stool with three legs—the social, the economic, and the environmental. The purpose of this program is to address the challenges of sustainability by balancing the humanities, social sciences, and natural sciences. The minor equips students to broaden their thinking about the origins of sustainability problems and possible solutions to include human institutions, ethics, and cultures as well as technologies and natural sciences. In so doing, the minor aims to foster student agency with regard to research on sustainability, responsibility to both human and non-human life, and civic engagement with local sustainability projects. The minor can supplement all majors in the university. Career possibilities include positions in design, law, food industries, planning and architecture, education, building certification, renewable energy, and waste management.

Students must complete 18 credits and a capstone experience (described below) to earn a minor in sustainability studies. The program’s interdisciplinary approach encourages students to take courses from a variety of departments. The program is structured as follows:

1. All students will take SUST 201 Introduction to Sustainability.
2. Students must then take at least 12 credits from Category A, defined as courses in which substantial content is foundational to engagement with sustainability. These credits must be distributed across three “clusters,” each of which denotes a major aspect of sustainability (see below). Having taken one course from each of the three clusters, students will then be able to take the remaining Category A credits from a cluster of their choosing.
3. Only 3 credits may come from Category B, defined as courses in which significant content is foundational to engagement with sustainability. Because their content may vary, courses from Category B must be approved by the program director to count for the minor.
4. At least 6cr must be at the 300 level or above.
5. Only one course may come from the student’s major.
6. With the exception of SUST courses, no course prefix may be used more than twice without written permission from the program director.
7. Special topics, independent study courses, and internship courses may be applied to either Category A or Category B with the approval of the Sustainability Studies Committee.
8. Students should consult with the program director 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 may qualify for prerequisite exemptions.
9. Students will work with an advisor from the Sustainability Studies program to develop a capstone experience that synthesizes their knowledge and skills related to sustainability. This requirement may be fulfilled by one of the following options: a portfolio, conference presentation, or other scholarly activity approved by the program director.

Minor—Sustainability Studies 18

Required Course: 3
SUST 201 Introduction to Sustainability 3cr

Category A 12-15

Cluster I: Ethics, Culture, and Society

ANTH 420	Environmental Anthropology	3cr
ANTH 430	Anthropology of Food	3cr
ENGL 361	Environmental Literature	3cr
HIST 385	People in Nature	3cr
PHIL 270	Ethics and the Environment	3cr
RLST 365	Native North American Religions	3cr

Cluster II: Natural Sciences and Environmental Stewardship

BIOL 103	Life on Earth	4cr
BIOL 114	Environmental Science	3cr
BIOL 115	Biotic Diversity of North America	3cr

BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 221	Environmental Health and Protection	4cr
BIOL 272	Conservation of Plant and Animal Resources	3cr
BIOL 450	Field Biology at Pymatuning Laboratory of Ecology	4cr
BIOL 490	Field Studies in Biology	3cr
GEOS 101	The Dynamic Earth	3cr
GEOS 103	Oceans and Atmospheres	3cr
GEOS 310	Environmental Geology	4cr
GEOS 370	Oceanography	4cr
PHYS 101	Energy and Our Environment	3cr
PSYC 331	Environmental Psychology	3cr
Cluster III: Environmental Policy, Economics, and Law		
CRIM 374	Environmental Crime and Justice	3cr
ECON 361	Environmental Economics	3cr
FDNT 470	Human Food Consumption Patterns	3cr
GEOG/RGPL 103	Global Cities: Issues in Planning and Development	3cr
GEOG 104	World Geography: Global Context	3cr
GEOG/RGPL 343	Geography of Fresh Water Resources	3cr
GEOG/RGPL 345	Biogeography for Environmental Managers	3cr
GEOG/RGPL 440	Conservation: Environmental Analysis	3cr
MKTG 444	Green Marketing	3cr
RGPL 426	Environmental Land Use Planning	3cr

Category B 0-3

ANTH 110, 213, 314, 444, ART 113, 213, BIOL 323, 362, 456, 460, ECON 338, 339, 365, GEOG 230, 435, GEOS 150, 152, 201, 324, JRNL 375, 466, KHSS 143, NURS 143, PHIL 122, PLSC 250, 389, PSYC 330, RLST 485, SOC 314, 337, 340, 417

Women’s and Gender Studies Minor

Website: www.iup.edu/womens

Lynn Botelho, Director

The Women’s and Gender Studies minor is designed to increase students’ interdisciplinary knowledge about the gendered nature of women’s experiences and the ways that all genders are shaped by history, culture, and society. In order to achieve this goal, the program offers courses using a variety of theories and methodologies and from a range of disciplines, such as anthropology, art, communications media, criminology, film, the fine arts, history, journalism and public relations, literature, philosophy, political science, psychology, religious studies, and sociology. The program explores gendered hierarchies and the impact of gender on the experiences of women, as well as women- and gendered-centered knowledge productions and learning. Students are encouraged to challenge traditional theories and research regarding women and gender through innovative and experimental classroom experiences and writing assignments. Students analyze the world, imagine and re-envision it, and seek to enact social transformation in both theory and practice.

A minor in women’s and gender studies strengthens and supplements every academic major and later professional careers. Students’ awareness of gendered, sexualized, classed, and racialized hierarchies make them valuable professionals in a range of careers, from business and banking to social work and law.

Minor—Women’s and Gender Studies 18

Required Course: 3

WGS 200	Introduction to Women’s and Gender Studies	3cr
Five Women’s and Gender Studies electives from the following: (1, 2, 3)		
ANTH 350	Anthropology of Gender	3cr
COMM 325	Women in Media	3cr
CRIM 450	Women and Crime	3cr
ENGL 225	Introduction to Literature by Women	3cr
ENGL 336	Language, Gender, and Society	3cr
ENGL 350	Gender and Sexual Orientation in Literature, Theory, and Film	3cr

ENGL 385	Advanced Women's Literature	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	Philosophies of Love	3cr
PLSC 404	Women and Politics	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
WGS 301	Asian American and Asian Diasporic Women's Literature	3cr
WGS 400	Feminist Theories	3cr
WGS 482	Independent Study	var-1-3cr
XXXX 281	Special Topics (offered within department) (4)	var-1-3cr
XXXX 481	Special Topics (offered within department) (4)	var-1-3cr
XXXX 493	Internship (5)	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 and Gender Studies, from selected WGS courses that have been recently developed. Please see the website www.iup.edu/womens for current information.
- (2) No more than two courses that count for a student's major can also count for the Women's and Gender Studies minor.
- (3) At least 6cr of course work must be at the 300 level or above.
- (4) Special topics courses that focus on women's and gender studies and are offered by individual departments can count as Women's and Gender Studies minor electives with the approval of director.
- (5) Internships (up to 3cr) may be counted toward the minor.

Department of Anthropology

Website: www.iup.edu/anthropology

Ben Ford, Chairperson; Adams, Allard, Chadwick, Garcia, Homsey-Messer, P. Neusius, S. Neusius, Poole; and professors emeriti Kruckman, 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 21st 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 four tracks.

General Anthropology Track

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.

Archaeology Track

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.

Applied Anthropology Track

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 to build expertise in a specific topical area.

Social Science Education/Anthropology Track

The department also offers preparation to be certified in the teaching of social science 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.

Minor in Anthropology

A minor in Anthropology allows students to apply the benefits of broad cross-cultural training to their chosen field of study. This minor is particularly helpful for students interested in international or global careers, or those who wish to apply the lessons of the past to their future pursuits. The 18-credit minor allows the flexibility to select the classes that best fit the student's interest.

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 ANTH courses. Students who are thinking about attending graduate school in anthropology are encouraged to consider applying for this track. Students complete 6 credits of ANTH 483 Honors Thesis in Anthropology and two other honors courses. Students also may substitute graduate courses approved by the department for the two other honors courses if they meet the graduate school's requirements for undergraduates taking graduate-level courses. To determine what courses they should take, as well as how Honors Track courses will be integrated into existing requirements for the anthropology major, students must consult closely with their advisors.

To apply, students must petition the department honors committee for admission no earlier than the second semester of their 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 with the following specifications: 49-50

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> 425	3cr
ANTH 480	Archaeological Theory and Research Design 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: (2)		28-35
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 course work 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:	49-50
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 <i>or</i> 460 Ethnographic Field School (2)	6cr
Free Electives: (3)	28-35
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 course work in a degree must consist of courses numbered 300 and above.	

Bachelor of Arts—Anthropology/Archaeology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	49-50
Mathematics: MATH 217	
Natural Science: Geoscience courses recommended (1)	
Social Science: ANTH 213 (required), GEOG 104 (recommended)	
Liberal Studies Electives: 9cr, no courses with ANTH prefix	
College:	0-6
Foreign Language Intermediate Level (2)	

Major:		39
Required Courses:		
ANTH 211 Cultural Anthropology		3cr
ANTH 213 World Archaeology		*cr (3)
ANTH 222 Biological Anthropology		3cr
ANTH 233 Language and Culture		3cr
ANTH 244 Basic Archaeology		3cr
Controlled Electives:		
Three methods courses: ANTH 320 (4, 5), 235, 415		9cr
Two theory courses: ANTH 425, 480		6cr
One archaeology area course, such as ANTH 315, 323, or 333		3cr
Any two anthropology courses from the following:		6cr
ANTH 250, 271, 272, 273, 274, 310, 314, 318, 370, 420, 484 (5), 485 (5), 486, 487, 488, 489, 490, 491, 492		
Free Electives: (6, 7)		25-32
Total Degree Requirements:		120

- Determine the specific courses in consultation with academic advisor.
- Intermediate-level foreign language may be included in Liberal Studies electives.
- Courses counted toward Liberal Studies credits do not receive duplicate credit in major.
- With department approval, an equivalent field school with lab component from another university may be used.
- May be repeated for credit with departmental approval but may only count once toward the requirements of the Archaeology Track.
- A minor in geoscience, geography, history, or other approved field is recommended. An internship (ANTH 493) also is recommended. The student's advisor should be consulted.
- State System Board of Governors policy states that at least 40 percent of the course work in a degree must consist of courses numbered 300 or above.

Bachelor of Science in Education—Social Science Education/Anthropology Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	47
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 (in addition to Liberal Studies Mathematics) (1)	3cr
Preprofessional Sequence:	
ACE 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 (2)	*cr
ANTH 213 World Archaeology	3cr
ANTH 222 Biological Anthropology	3cr
One additional interdisciplinary course from the following:	
ANTH 233 Language and Culture <i>or</i>	3cr
<i>or</i> 244 Basic Archaeology	
Two area ethnography courses from the following:	
ANTH 271, 272, 273, 274, 314, 370	6cr
Two additional ANTH 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	
<i>or</i> 285 Systems <i>or</i> Comparative Government II:	
Non-Western Political Systems	3cr
SOC 151 Principles of Sociology <i>or</i>	
<i>or</i> 161 Foundations of Sociology:	
Social Relations in Groups and Organizations <i>or</i>	
<i>or</i> 231 Contemporary Social Problems	3cr
Total Degree Requirements:	121

- (*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of the catalog. To student teach, students must have a 3.0 cumulative GPA in their major (ANTH courses).
- (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.

Minor—Anthropology 18

Required Course:	
ANTH 110 Contemporary Anthropology	3cr
Controlled Requirements:	
One core course from the following:	3cr
ANTH 211 Cultural Anthropology	
ANTH 222 Biological Anthropology	
ANTH 233 Language and Culture	
ANTH 244 Basic Archaeology	
Controlled Electives:	
Four additional courses in ANTH with at least 6cr 300 level or higher	12cr

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
Two other honors courses	6cr (1)
(1) Students also may substitute graduate courses approved by the department for the two other honors courses if they meet the graduate school's requirements for undergraduates taking graduate-level courses.	

Department of Economics

Website: www.iup.edu/economics

David B. Yerger, Chairperson; Jeffords, J. Jozefowicz, S. Jozefowicz, Potts, Radell, Sissoko, Thompson, Vick, 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 program 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.

Three different degree programs are available: a bachelor of arts program in economics that prepares students for immediate employment or graduate school; a bachelor of arts degree program in economics/pre-law for students who wish to attend law school; and the bachelor of science in education degree 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.

Economics Honors Program

The honors program is open by departmental permission to economics and economics/prelaw 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/H/, and 456/H/. In addition, students must choose one class from the following: FIN 310, 315; MATH 341, 363, 371, 411, 412; or HIST 487/H/. 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.

*In practice, MATH 214, 216, or 217 can be substituted for ECON 355.

To apply, an application should be filed with the chairperson of the Department of Economics.

Bachelor of Arts—Economics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 50-51

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 (3) 3cr

ECON 421 Macroeconomic Analysis 3cr

ECON 422 Microeconomic Analysis 3cr

Controlled Electives:

Five other ECON courses (4, 5, 6) 15cr

Free Electives: 36-43

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.	
(6) Neither 101 nor 143 counts as an ECON controlled elective.	

Bachelor of Arts—Economics/Pre-law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 50-51

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
ECON 421	Macroeconomic Analysis	3cr
ECON 422	Microeconomic Analysis	3cr

Controlled Electives:

Four other ECON courses (4, 5, 6) 12cr

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, 225, 255

English: ENGL 212, 227, 265, 310, 321

History: HIST 320, 341, 342, 346, 475

Philosophy: PHIL 101, 122, 130, 221, 270, 320, 450

Political Science: PLSC 358, 359, 361, 405

Free Electives: 18-31

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.
- (6) Neither 101 nor 143 counts as an ECON controlled elective.

Bachelor of Science in Education—Social Studies Education/Economics Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46

Mathematics: 3cr

Natural Science: Option II

Social Science: ANTH 110, ECON 121, PSYC 101

Liberal Studies Electives: 6cr, GEOG 230, SOC 337, no course 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:

ACE 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

Controlled Electives: Upper-level ECON 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 GEOG course	3cr
HIST 204	United States History to 1877	3cr
HIST 205	United States History since 1877	3cr
PLSC 111	Power and Democracy in America	3cr
PLSC 280 or 285	Comparative Government I: Western Political Systems or Comparative Government II: Non-Western Political Systems	3cr
Social Studies Minor (2)		6cr

Total Degree Requirements: 120

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog. 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 18

Required Courses:

ECON 121	Principles of Macroeconomics	3cr
ECON 122	Principles of Microeconomics	3cr

Controlled Electives:

Four courses from ECON 200 or higher with at least 6cr 300-level or higher (1, 2) 12cr

- (1) MATH 214, 216, 217, or another quantitative class approved by the chairperson may be substituted for ECON 355. If one of the previously noted MATH classes is substituted for ECON 355, it will not count as a 300-level or higher course.
- (2) Neither 101 nor 143 counts as an ECON controlled elective.

Economics Honors Track **12**

Required Courses:		9
ECON 355	Statistics for Economists	3cr
ECON 356/H/	Introduction to Econometrics	3cr
ECON 456/H/	Advanced Econometrics	3cr
One course from the following:		3
FIN 310	Fundamentals of Finance	3cr
FIN 315	Financial Analysis Using Electronic Spreadsheets	3cr
MATH 341	Differential Equations	3cr
MATH 363	Mathematical Statistics I	3cr
MATH 371	Linear Algebra	3cr
MATH 411	Univariate Data Analysis	3cr
MATH 412	Multivariate Statistics	3cr
HIST 487/H/	Honors Colloquium in History	3cr

(1) MATH 214, 216, or 217 may be substituted for ECON 355.

Department of English

Website: www.iup.edu/english

Gian S. Pagnucci, Chair; Berlin, Bizzaro, Black, Branscum, Camp, Carpenter, Comfort, Craig, Deckert, Downing, Driscoll, Dube, Farrington, Gatta, Hanauer, Heflin, Hibsman, Holm, Kerr, Kuipers, Marsden, Miller, Nienkamp, Norris, Orchard, Park, Porter, Powers, Rafoth, Savova, Sell, Shelly, Sherwood, Siegel-Finer, Slater, Stewart, Stilwell, Thompson, Vetter, Villa, Watson, Weinstein, Wender, Williamson, Yang; and professors emeriti Aghbar, Alvine, Bencich, Bower, Bright, Cahalan, Chow, Craig, Davis, Emerick, Fontaine, Freund, Gatti, Gebhard, Gray, M. Hayward, N. Hayward, B. Hudson, S. Hudson, Hurlbert, Johnson, Kraszewski, Masiello, McAndrew, McClenahan, McPherson, Miller, Perdue, Ray, Roffman, Roumm, Seinfeld, Shafer, Sitler, Swigart, Tannacito, Vella, Welsh, Williamson, 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 program in English reflects the diversity of subject matter, methods, and purposes of this vital, constantly evolving field. BA 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. The department encourages 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 BA 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 BA majors will take 6 credits of English elective courses and declare a track of 15 credits, chosen from the following: Writing Studies or Pre-law.

Since the BA program can be completed with 36 credits of course work, 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, The department encourages its 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.

English/Literature/Culture Track

The Literature/Culture Track enables students to design a course of study in the history, meaning, function, and aesthetics of texts of all kinds. A student who completes this major will be able to identify the unique material, symbolic, formal, and aesthetic qualities of texts; apply the analytical skills and methods best suited to comprehend the significance of texts; analyze the ways that texts interact with audience, culture, medium, and ideology; evaluate the role of theory—its methods, history, politics, and functions—in textual analysis; and examine the ways in which questions of race, gender, sexual orientation, and identity affect interactions with both traditional and nontraditional texts and theory. The Literature/Culture Track prepares students for any profession that requires strong analytic, communication, cultural, and aesthetic skills, and for academic study in literary and cultural studies.

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.

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; and 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.

Education Program

The English Department offers a program leading to the bachelor of science in education degree program 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 the 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 and Communications. 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 Communications section of this catalog and the *English Education Handbook*.

Minor in English

To minor in English, 18 credits in English courses are required beyond the Liberal Studies requirement of ENGL 101 and 202. At least 6 of these credits must be numbered 300 level or higher. ENGL 121 may be used to fulfill part of the 18 credits required. Of these 18 credits, no more than 6 credits may be transferred to IUP from another university.

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 apply, students must submit a letter of application and a list of English courses taken (with instructors' names) to the chairperson of the Honors Track program. To be accepted, students must receive favorable evaluations from a majority of professors of courses taken and approval by the Honors Track program committee.

Students must complete one upper-level (300-400) H-designated course (3 credits) or ENGL 483/H Honors Thesis in English and ENGL 484 Topics in English Studies. In conjunction with ENGL 484, students must take ENGL 485/H Honors Portfolio.

Bachelor of Arts—English/Literature/Culture Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46

Humanities-Literature: ENGL 122

Mathematics: 3cr

Liberal Studies Electives: 6cr, no courses with ENGL prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 36

Required Courses:

Two literary survey courses from the following: 6cr
ENGL 210, 211, 212, 213, 226

One writing course from the following: ENGL 220, 221, 222 3cr

One literacies course from the following: ENGL 208, 308, 313 3cr

Capstone course: ENGL 484 3cr

Controlled Electives: (2,3)

Four courses from the following: ENGL 203, 208, 210, 211, 212, 213, 225, 226, 265, 308, 310, 313, 328, 329, 330, 332, 333, 335, 336, 337, 340, 341, 342, 343, 344, 348, 349, 350, 354, 361, 385, 386, 387, 390, 396, 398, 430, 434, 436, 440, 450, 460, 461, 462, 463, 493 12cr

Three courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202 9cr

Free Electives: 31-38

Total Degree Requirements: 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 BA degree recipient much more employable by providing job experience. Students should see the English BA internship director for advice about available openings.

(3) Courses used to fulfill core requirements cannot also be used to fulfill track requirements.

Bachelor of Arts—English/Writing Studies Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Humanities-Literature: ENGL 122

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with ENGL prefix

College: 0-6

Foreign Language Intermediate Level (1)

Major: 36

Required Courses:

Two literary survey courses from the following: 6cr

ENGL 210, 211, 212, 213, 226

One writing course from the following: ENGL 220, 221, 222 3cr

One language course from the following: ENGL 203, 313, 328 3cr

Capstone course: ENGL 484 3cr

Controlled Electives: (2)

Two courses from craft and genre: ENGL 220, 221, 222, 321, 325, 326, 327, 422, ENGL/THTR 347 6cr

One course from Forms and Theories: ENGL 308, 335, 340, 341, 342, 343, 450 3cr

Two courses from Studio/Portfolio/Career Preparation: 6cr

ENGL 360, 420, 483, 493

Two courses with ENGL prefix except ENGL 100, 101, 121, 122, and 202 6cr

Free Electives: 28-35

Total Degree Requirements: 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 BA degree recipient much more employable by providing job experience. Students should see the English BA internship director for advice about available openings.

Bachelor of Arts—English/Pre-law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Humanities-Literature: ENGL 122

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with ENGL prefix

College: 0-6

Foreign Language Intermediate Level (1)

Major: 36

Required Courses:

Two literary survey courses from the following: 6cr
ENGL 210, 211, 212, 213, 226

One writing course from the following: ENGL 220, 221, 222 3cr

One language course from the following: ENGL 203, 313, 328 3cr

Capstone course: ENGL 484 3cr

One English Studies/Pre-law required course: ENGL 265 3cr

Controlled Electives in English/Pre-law: (2, 3) 18cr

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

Other Requirements: Pre-law Interdisciplinary Track 3-21

Seven courses, including at least one from each of six areas:

Business: ACCT 201, ACCT 202, BLAW 235

Criminology: CRIM 210, 215, 225, 255

Economics: ECON 121, 122, 332

History: HIST 320, 341, 342, 346, 475

Philosophy: PHIL 101, 122, 130, 221, 270, 320, 450

Political Science: PLSC 358, 359, 361, 405

Free Electives: 7-32

Total Degree Requirements: 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 BA degree recipient much more employable by providing job experience. Students should see the English BA internship director for advice about available openings.
- (3) Courses used to fulfill core requirements cannot also be used to fulfill track requirements.

Bachelor of Science in Education—English Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Humanities-Literature: ENGL 122

Mathematics: 3cr, MATH 101 or higher

Social Science: PSYC 101

Liberal Studies Elective: 3cr, MATH (1), no courses with ENGL prefix

College: 6
Foreign Language Intermediate Level or Free Electives

College: 30

Preprofessional Education Sequence:

ACE 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 477/577 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
CHSS 343 Applied Practice in Secondary English Language Arts 1cr
EDUC 441 Student Teaching 12cr
EDUC 442 School Law 1cr
EDUC 452 Teaching of English and Communication in the Secondary School 3cr

Major: 43

Required Courses:

ENGL 212 American Literature: Beginnings to 1900 3cr
ENGL 220 Advanced Composition I 3cr
ENGL 314 Speech and Communication in the Secondary English Classroom 3cr
ENGL 323 Teaching Literature and Reading in the Secondary School 3cr
ENGL 324 Teaching and Evaluating Writing 3cr
ENGL 329 The History of the English Language 1cr
ENGL 415/515 English Language Studies for Teachers 3cr
ENGL 418/518 Young Adult Literature 3cr
ENGL 426/526 ESL Methods and Materials 3cr
ENGL 434 Shakespeare 3cr

Controlled Electives: (2)

One Film Studies Track course 3cr
One British literature survey course from ENGL 210 or 211 3cr
One Literature/Cultural Track course 3cr
Choose one course from the following LC Track:
ENGL 213, 225, 226, 344, 348, 350, 385, 396, 398, 437, 463 3cr
One general English elective (any track) 3cr

Total Degree Requirements: 122-123

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education” in the College of Education and Communications section of section of this catalog.

(1) The second MATH course is a teacher certification requirement and counts as Liberal Studies elective credits for mathematics.

- (2) One of the controlled English-elective track courses (either the Literature/Cultural Track or the general English elective from any track) must be a Global and Multicultural course; this requirement is separate from and in addition to the global and multicultural Liberal Studies requirement.

English Honors Track

7

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 485/H/ Honors English Portfolio 1cr
6cr in any combination of the following options:
ENGL 483/H/ Honors Thesis in English 0-6cr
Any H-designated English course 0-6cr

Department of Foreign Languages

Website: www.iup.edu/foreignlanguages

Laura Delbrugge, Chairperson; Dassier, Glisan, Huhn, Killam, Liu, McCreary, McDaniel, Rodríguez, Ryan-Sams, Smith-Sherwood, Witthoef, Zambrano-Paff; and professors emeriti Broad, Drescher, Foltz, Henry, Jones, Mendizábal, Ready, Sullivan, 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.

Certificate in Foreign Language concentrating in one of the following: Chinese, French, German, Japanese, or Spanish

The Foreign Language Certificate is an 18-credit program aimed at those who want to add a foreign language credential to their main academic preparation, either as a bachelor’s degree in progress or in a postbaccalaureate setting. The certificate is an excellent opportunity for students in any college of the university, particularly those in colleges where foreign language study is not generally required, such as the Eberly College of Business and Information Technology and the College of Health and Human Services.

This certificate offers students a variety of options for fulfilling the requirements. In addition to completing the course sequence, students may earn credits toward the certificate by taking an Advanced Placement Exam, or they may earn ACE credits. Students with previous foreign language experience who do not earn credits through Advanced Placement or ACE are required to take a departmentally-approved language placement exam for possible exemption from some courses. Students are allowed to exempt out of up to 12 credits of the initial language sequence either by exam or through transfer credits from another institution. All students, including returning, graduate, and transfer students, are required to take at least six credits at IUP from Foreign Language levels 220 and above.

Certificate in Foreign Language concentrating in one of the following: Chinese, French, German, Japanese, or Spanish

18

(A) Initial Language Sequence

12cr

Courses with these numbers are offered in CHIN, FRNC, GRMN, JAPN, and SPAN

101 4cr
102 4cr
201 4cr

(B) Intermediate Language Sequence

6cr

To earn a:

- **Foreign Language Certificate in Spanish**, students must complete SPAN 220 and 3 additional credits above the 201 level. The 3 additional credits may be either SPAN 230 or another course related to Spanish, which must be approved by the

Department of Foreign Languages chairperson or the chairperson's designee.

- **Foreign Language Certificate in French**, students must complete FRNC 220 and 3 additional credits above the 201 level. The 3 additional credits may be either FRNC 230 or another course related to French, which must be approved by the Department of Foreign Languages chairperson or the chairperson's designee.
- **Foreign Language Certificate in German**, students must complete GRMN 220 and 3 additional credits above the 201 level. The 3 additional credits may be either GRMN 230 or another course related to German, which must be approved by the Department of Foreign Languages chairperson or the chairperson's designee.
- **Foreign Language Certificate in Chinese**, students must complete 6 credits above the 201 level in course work related to Chinese language or culture. The 6 additional credits must be approved by the Department of Foreign Languages chairperson or the chairperson's designee.
- **Foreign Language Certificate in Japanese**, students must complete 6 credits above the 201 level in course work related to Japanese language or culture. The 6 additional credits must be approved by the Department of Foreign Languages chairperson or the chairperson's designee.

Courses taken in a study abroad context may also count toward the certificate. Transfer credit received through study abroad experiences must be approved by chairperson of the Department of Foreign Languages or the chairperson's designee or previously approved through the Admissions-Transfer Services Office.

(C) Oral Proficiency Interview Exam

By the midterm of the final semester of course work for the certificate, students will be required to complete the Oral Proficiency Interview (OPI) or the Oral Proficiency Interview by Computer (OPIc), administered by Language Testing International (LTI). The OPI and OPIc provide an independent rating of the student's oral skills in the language, which may be useful for employment purposes. There is a fee for the OPI and the OPIc, for which students will be responsible.

French

Placement

Students with no previous French study will be placed in FRNC 101, a class reserved for true beginners. Students with previous French study in high school or college will be placed into the appropriate course by means of the online WebCAPE placement test. This test may be taken more than once before enrolling in French courses; it is free of charge for IUP students. Instructions on how to take the online WebCAPE test are available on the departmental website and in print in the Department of Foreign Languages office (Sutton Hall). As deemed necessary by the individual student or French faculty, the proposed WebCAPE placement may be further refined: Students' writing and speaking proficiency may be additionally assessed by one or more faculty members in the French program 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 FRNC 101, 102, or 201 when credit has already been received for a higher numbered course.

IUP Course Credit for Acquired Proficiency

Incoming students may receive course credit for their oral proficiency levels in French 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 French at IUP:

ACTFL Oral Proficiency Ratings (rated by LTI)	ACE Credit Recommendations	IUP French Course Equivalencies
Intermediate-Mid	4 Lower Division credits	Either FRNC 102 or 201, depending on placement on departmental written exam
Intermediate-High/ Advanced Low	8 Lower Division credits	FRNC 201 and 220
Advanced-Mid or higher	10 Lower Division credits	FRNC 201, 220, and approved conversation elective

To begin the process, students must contact LTI by e-mail (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 to be paid by the candidate.

Study Abroad French Studies Summer Program: Aix-en-Provence, France/Intensive French Language (Aix-Marseille University)

The Department of Foreign Languages has partnered with the Office of International Education and CEA to establish a study abroad experience in Aix-en-Provence, France. All students having successfully completed FRNC 102 are invited to consider studying abroad. Students seeking the French certificate or a minor in French are strongly encouraged to study abroad in Aix-en-Provence.

The Summer I program proposes a six-week session, including 20 hours of weekly language instruction as well as cultural field trips, and weekly debriefing sessions with faculty from the IUP Department of Foreign Languages. Housing options include both apartments and homestay with a host family. The program offers 6 hours of transfer credits that may be used toward completion of any foreign language requirement or the French minor.

For further information about cost and application procedures, contact the Department of Foreign Languages.

Minor—French

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Required Courses:

FRNC 201	Intermediate French	4cr
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

Study Abroad

The department encourages all students who study German at IUP to consider study abroad for one or two semesters. 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 must complete 18 credits in GRMN courses numbered higher than 102 to be recognized as having minored in German. Nine of the 18 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.

IUP Course Credit for Acquired Proficiency

Incoming students may receive course credit for their oral proficiency levels in German 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 German at IUP:

ACTFL Oral Proficiency Ratings (rated by LTI)	ACE Credit Recommendations	IUP German Course Equivalencies
Intermediate-Mid	4 Lower Division credits	Either GRMN 102 or 201, depending on placement on departmental written exam
Intermediate-High/ Advanced Low	8 Lower Division credits	GRMN 201 and 220
Advanced-Mid or higher	10 Lower Division credits	GRMN 201, 220, and approved conversation elective

To begin the process, students must contact LTI by e-mail (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 to be paid by the candidate.

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 two degree programs: the BSEd and the BA program with a major in Spanish.

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 and public relations, 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.

Placement

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered before the beginning of the semester. In addition, students judged to be native or heritage speakers (either through the written placement exam or by classroom instructors), will have their speaking proficiency assessed by an oral proficiency tester in the Department of Foreign Languages who is currently certified by the American Council on the Teaching of Foreign Languages (ACTFL). Students who receive an advisory oral proficiency rating of Advanced Low level on the oral proficiency scale developed by ACTFL will not be permitted to enroll in SPAN 101, 102, 201, or 220. Students who receive an advisory oral proficiency rating of Advanced-Mid level or higher will not be permitted to enroll in SPAN 101, 102, 201, 220, 350, or 450. Students who are rated in the advanced range are encouraged to seek course credit for their oral proficiency levels by applying through the American Council on Education (ACE) Credit Recommendation Service in conjunction with Language Testing International (LTI) (see next section). In the case of Spanish majors and minors who place out of the courses listed as a result of having the advanced-level oral proficiency and choose NOT to pursue ACE credits, SPAN 201 will be waived (no credits granted), and students will need to seek other Spanish classes in place of the required SPAN 220 and 350 courses.

No student will be permitted 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. No student will be permitted to register for or take a D/F repeat in SPAN 220 when credit has already been received for SPAN 350 and/or 450.

Course Credit for Oral Proficiency Levels

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 3 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) 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 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 multidisciplinary 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, minor, or certificate in Spanish. Students interested in more information should contact the department.

Internships: Internships in Spain, Mexico, and Costa Rica are available through the department. Internship is a credit-bearing course, SPAN 493. Noncredit internships cannot be considered. 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: 49-50

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 330 Advanced Spanish Composition and Grammar 3cr

SPAN 340 Hispanic Cultures into the 19th Century 3cr

SPAN 342/344 Spanish Cultures from the 19th Century to the Present/Spanish-American Cultures from the 19th Century to the Present 3cr

SPAN 350 Advanced Spanish Conversation 3cr

SPAN 362/364 Survey of Peninsular Literature/Survey of Spanish American Literature 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:

33-34

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 the programs primarily administered by faculty of IUP's Department of Foreign Languages. Students wishing to fulfill this requirement through any other study abroad program must 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 BSEd majors in the "3-Step Process for Teacher Education" in the College of Education and Communications section of this catalog. Students should refer to the Department of Foreign Languages/Spanish website and the *Spanish Education K-12 Student Handbook* for departmental guidelines and detailed explanations of program requirements, including the procedure for taking the OPI and WPT.

Mid-Program Review

During the semester in which students complete EDUC 242 with a "C" or better, they must meet the following departmental requirements:

1. Complete a departmental/advisory writing proficiency test in Spanish. Students will receive written feedback on their writing performance including areas for improvement that may be necessary to reach the exit requirement of Advanced-Low in writing.
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 Spanish section of 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 course work 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 course work of 3.0.
4. Earn a grade of "C" or better in SPAN 330 and 453.

Bachelor of Science in Education—Spanish Education K-12 (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

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:

31

Preprofessional Education Sequence:

ACE 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

EDUC 453 Teaching of Foreign Languages in the Secondary School 3cr

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EDUC 453 Teaching of Foreign Languages in the Secondary School 3cr

(*) See requirements leading to teacher certification, titled "3- Step Process for Teacher Education," in the College of Education and Communications 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) 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 credits extending beyond the intermediate level. Students may fulfill this requirement by participating in any of the programs primarily administered by faculty of IUP's Department of Foreign Languages. Students wishing to fulfill this requirement through any other study abroad program must 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.

Minor—Spanish **18**

Required Courses:

SPAN 220	Intermediate Spanish Conversation	3cr
SPAN 230	Intermediate Spanish Composition and Grammar	3cr
SPAN 260	Introduction to Hispanic Literature	3cr
SPAN 330	Advanced Spanish Composition and Grammar	3cr
Two additional courses at the SPAN 3XX or 4XX level (except SPAN 390)		6cr

Spanish Honors Track **12**

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

Department of Geography and Regional Planning

Website: www.iup.edu/georegionalplan

John E. Benhart Jr., Chairperson; Buckwalter, Ghosh, Hoch,* Masilela,* Okey, Patrick, Schaney, G. Sechrist, R. Sechrist, Smith; and professors emeriti Begg, Bencloski, Forbes

*Core Regional Planning faculty

The Department of Geography and Regional Planning offers three separate degree programs for the geographer, planner, and teacher: 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.

Specific core requirements in Geography and Regional Planning offer a structured approach for majors. Appropriate subfields or concentrations are available in both programs to prepare students for graduate work and to support different career options for majors. There are five concentrations for the geography major and two concentrations for the regional planning major.

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 50 work stations, large-format plotters, global positioning system units, and water and atmospheric monitoring devices. Geographic information systems, image processing, and computer-aided drafting software includes the Arc GIS software suite, ERDAS Imagine, MapInfo, IDRISI, Trimble GPS Pathfinder Office and Terrasync, as well as MiniCad and VectorWorks.

A strong internship program directed by Brian Okey offers numerous public, private, and nonprofit placements in industry, engineering, conservation, land management, and planning agencies at the local, state, and federal levels. Because of employment demand for students from department programs, approximately 80 percent of internship placements are paid positions.

Geography

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 within 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.

In addition to the geography core (GEOG), there are five concentrations for specific geographic competencies: GIS/Cartographer, Environmental Geographer, Economic Geographer, Energy Geotechnology/Environmental Compliance, and General Geographer.

Geography—General Geography Concentration

The General Geography Concentration encourages the major to sample courses from different subfields of the discipline. This concentration 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.

Geography—Geographic Information Systems and Cartographer Concentration

The Geographic Information Systems and Cartographer Concentration prepares students for employment as geographic information specialists, facilities managers, cartographers, and remote sensing specialists. Course work 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 course work for the analysis of wildlife habitat, facilities management, land use planning and site design, and transportation systems design and maintenance.

Geography—Economic Geographer Concentration

The Economic Geographer Concentration provides a broad framework of ideas and theories in addition to a task-oriented approach to location analysis. Site planners articulate the needs of the community for economic space, the demands for convenient transport, the role of private enterprise, and the management of growth. This interrelated group of courses is useful to students, because economic geographers and developers 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.

Geography—Environmental Geographer Concentration

The Environmental Geographer Concentration 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.

Geography—Energy Geotechnology/Energy Environmental Compliance Concentration

The Energy Geotechnology/Energy Environmental Compliance Concentration is designed to prepare majors in geography for careers as spatial/geographic information systems analysts or environmental compliance professionals in the energy industries, or for further graduate studies. Students who select this concentration learn about energy resources in northern Appalachia (natural gas, coal, and wind), aspects of the natural environment in the region, regulatory and compliance regimes for the energy industries at federal and state levels, the conceptual and technical aspects of geospatial techniques (cartography, geographic information systems, and global positioning systems), and specific spatial applications implemented in the

energy industries. They should be well prepared both conceptually and technically upon graduation for employment in the energy industries.

Geography Minor

A minor in geography 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 this field relevant. A minor consists of 18 credits in courses taken only with the GEOG prefix; at least two courses must be at the 200 level and at least two courses must be at the 300 level or above. The department suggests students take major core courses if graduate study is anticipated.

Geography Honors Program

The honors program is open by departmental permission to majors with at least a 3.25 GPA in total university course work and a 3.25 GPA in geography courses. After completing 45 credits of university course work, all qualified majors will be invited to join the Geography Honors Track. Social Studies Education/Geography Track majors are encouraged to participate, with the realization that participation will require more than 120 credits.

Students select one of the following 12-credit options: (1) Two courses from GEOG 333, 334, 337, or 440 and two 600-level (graduate seminar) courses, (2) Two courses from GEOG 333, 334, 337, or 440 and one 600-level (graduate seminar) course and GEOG 483 Honors Thesis, (3) Three courses from GEOG 333, 334, 337, or 440 and GEOG 483 Honors Thesis, (4) Three courses from GEOG 333, 334, 337, or 440 and one 600-level (graduate seminar) course. Honors students who enroll in the above designated undergraduate courses will undertake an honors project identified in conjunction with the course instructor and reviewed by the Geography program director or the department chair (if the director is the course instructor).

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 major, students should consult their academic advisor. To apply, students must submit a letter of intent to the Geography program director. The student's advisor and one other Geography faculty member must endorse the student's application.

Bachelor of Arts—Geography/General Geography Concentration

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 217 (1)

Liberal Studies Electives: 9cr, BTED/COSC/IFMG 101 recommended; no courses with GEOG prefix

College: 0-6
Foreign Language Intermediate Level (2)

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: 22-29
GEOG 493 Internship (strongly recommended) 3cr

Total Degree Requirements: 120

(1) An alternative to MATH 217 is 6cr of MATH courses. Only one must be a Liberal Studies MATH course.

(2) Intermediate-level foreign language may be included in Liberal Studies electives.

Bachelor of Arts—Geography/Economic Geographer Concentration

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49

Mathematics: MATH 217 (1)

Natural Science: Option II

Social Science: ECON 121

Liberal Studies Electives: 9cr, ECON 122; no courses with GEOG prefix

College:

Foreign Language Intermediate Level (2) 0-6

Major: 45

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

Concentration Courses:

Base Requirements:

GEOG 313	Cartography II (3)	3cr
GEOG 332	Urban Geography	3cr
GEOG 333	Trade and Transportation	3cr
Any three GEOG listed below. An optional issue focus consists of three from one group plus two corresponding electives:	9cr	

Location analysis controlled electives: (4)

GEOG 316, 331, 334, 404

Global commerce controlled electives: (5)

GEOG 331, 334, 335, 337

Travel and tourism controlled electives: GEOG 251-257

(second course from the group), GEOG 261, 336, 337

Issue Focus Electives: 0-6

Location analysis: ECON 383, MATH 121 and/or 217 (6),
RGPL 352, 464

Global commerce: COMM 230, ECON 345, 346, 350,
PLSC 280-285 (inclusive)

Travel and tourism: COMM 230, ECON 365,
HIST 301-360 (inclusive), PLSC 280-285 (inclusive)

Free Electives: 14-26

GEOG 493 Internship (recommended)

Total Degree Requirements: 120

- (1) An alternative to MATH 217 is 6cr of MATH courses. Only one must be a Liberal Studies MATH course.
- (2) Intermediate-level foreign language may be included in Liberal Studies electives.
- (3) Three courses (9cr) of any combination from ACCT, FIN, or MGMT may replace the GEOG 313 requirement.
- (4) With special permission may include GEOG 620 (3cr).
- (5) With special permission may include GEOG 623 (3cr).
- (6) This must be in addition to courses for the MATH requirement.

**Bachelor of Arts—Geography—Energy Geotechnology/
Energy Environmental Compliance Concentration**

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 217 (1)

Social Science: GEOG 102 recommended

Liberal Studies Electives: 9cr, BTED/COSC/IFMG 101 recommended, no courses with GEOG prefix

College: 0-6

Major: 42

Required Courses:

GEOG 213	Cartography I	3cr
GEOG 230	Cultural Geography	3cr
GEOG 231	Economic Geography	3cr
GEOG 316	Introduction to Geographic Information Systems	3cr
GEOG 341	Climatology	3cr
GEOG 342	Physiography	3cr
GEOG 411	History of Geography	3cr
GEOG 412	Research Seminar	3cr

Concentration Emphases: 18cr

1) Energy Environmental Permitting and Compliance**2) Energy Geotechnology****Energy Environmental Permitting****and Compliance Emphasis** (6 courses) (4)

GEOG 343	Geography of Fresh Water Resources	3cr
GEOG 345	Biogeography for Environmental Managers	3cr
GEOG 420	Technical Issues in Geographic Information Systems	3cr

GEOG 425	Global Positioning Systems Concepts and Techniques	3cr
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GEOG 435	Geography of Energy (3)	3cr
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GEOG 440	Conservation: Environmental Analysis	3cr
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GEOG 444	Energy Development and Compliance I (3)	3cr
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GEOG 445	Energy Development and Compliance II	3cr
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RGPL 350	Introduction to Planning	3cr
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RGPL 426	Environmental Land Use Planning	3cr
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Energy Geotechnology Emphasis (6 courses) (4)

GEOG 314	Map and Photo Interpretation	3cr
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GEOG 343	Geography of Fresh Water Resources	3cr
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GEOG 415	Remote Sensing	3cr
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GEOG 420	Technical Issues in Geographic Information Systems	3cr
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GEOG 421	Enterprise GIS Management	3cr
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GEOG 425	Global Positioning Systems Concepts and Techniques	3cr
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GEOG 435	Geography of Energy (3)	3cr
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GEOG 444	Energy Development and Compliance I (3)	3cr
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GEOG 445	Energy Development and Compliance II (3)	3cr
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Free Electives: 22-29

ANTH 4115 and BIOL 114 recommended

Total Degree Requirements: 120

- (1) Or 6cr of MATH courses
 - (2) Intermediate-level foreign language may be included in Liberal Studies electives.
 - (3) Required concentration emphasis courses
 - (4) Students must take at least two additional different courses to meet the requirements for both emphases (with the minimum number of courses being eight).
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**Bachelor of Arts—Geography/Environmental Geographer
Concentration**

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 217 (1)

Natural Science: 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 (2) 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

Concentration Courses: Five courses from the following:

GEOG 314	Map and Photograph Interpretation	3cr
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GEOG 316	Introduction to Geographic Information Systems	3cr
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GEOG 343	Geography of Fresh Water Resources	3cr
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GEOG 345	Biogeography for Environmental Managers	3cr
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GEOG 415	Remote Sensing	3cr
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GEOG 425	GPS Concepts and Techniques	3cr
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GEOG 435	Geography of Energy	3cr
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GEOG 440	Conservation: Environmental Analysis	3cr
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Free Electives: 22-29

Strongly Recommended: GEOG 493

Recommended: BIOL 210, 362, GEOS 201, 202, RGPL 458, 464

Total Degree Requirements: 120

- (1) An alternative to MATH 217 is 6cr of MATH courses. Only one must be a Liberal Studies MATH course.
 - (2) Intermediate-level foreign language may be included in Liberal Studies electives.
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**Bachelor of Arts—Geography/GIS and Cartographer
Concentration**

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 217 (1)

Liberal Studies Electives: 9cr, BTED/COSC/IFMG 101 recommended; no courses with GEOG prefix

College: Foreign Language Intermediate Level (2) 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

Concentration 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 420	Technical Issues in Geographic Information Systems	3cr
GEOG 421	Enterprise GIS Management	3cr
GEOG 425	GPS Concepts and Techniques	3cr
Free Electives:		22-29
Strongly Recommended: GEOG 493		
Recommended: RGPL 453, 454		
Total Degree Requirements:		120
(1) An alternative to MATH 217 is 6cr of MATH courses. Only one must be a Liberal Studies MATH course.		
(2) Intermediate-level foreign language may be included in Liberal Studies electives.		

Minor—Geography **18**

Controlled Electives: (1)
 At least two courses at the 200 level
 At least two courses at the 300 level or above

(1) Only courses taken as GEOG may be counted toward the minor.

Geography Honors Track **12**

Prerequisites: Declared major in geography, completion of at least 45cr of university course work, 3.25 or higher GPA in major and overall, plus endorsement of advisor and one other Geography faculty member

Select one of the following options:

Two courses from GEOG 333, 334, 337, and 440 (1) and two 600-level seminars

Two courses from GEOG 333, 334, 337, and 440 (1) and one 600-level seminar and GEOG 483/H/ (2) GEOG 333, 334, 337, and 440 (1) and GEOG 483/H/ (2)

Three from GEOG 333, 334, 337, and 440 (1) and one 600-level seminar

(1) Students in these designated undergraduate courses will undertake an honors project identified in conjunction with the course instructor and reviewed by the Geography program director or the department chair (if the director is the course instructor).

(2) Credits for GEOG 483 are counted in the appropriate departmental concentration requirement.

Regional Planning

The mission of the Regional Planning program is to provide opportunities for students, planning professionals, citizens of a diverse regional community to master fundamental and innovative planning principles. The program trains students to become professional planners through a process that emphasizes conceptual knowledge, experiential learning, innovative planning skills, and civic engagement. Students work with colleagues and planners to guide change in a way that will make communities better places to live for present and future generations.

Employment opportunities for planners are excellent. This program has prepared students to work in planning agencies at the federal, state, regional, county, and local levels as well as in the private sector with planning consulting and engineering firms. As planners, they have been trained to work with the public to guide growth and change in metropolitan regions across the country. The two concentrations—Environmental Planning and GIS/Land Use Planning—are designed to focus on the knowledge, techniques and strengths of the faculty members, as well as provide students maximum

opportunity to be competitive in the planning job market. As part of their course of study, students address and solve real-world problems through class projects and intern with practicing planners who deal with these issues in a professional environment. Planners work with communities to improve the quality of life for people who live there. They take a comprehensive view of issues, listen to all citizen perspectives, endeavor to reconcile controversy, and propose alternatives that can guide community decision-making in allocating finite resources to create better places to live.

Regional Planning—Land Use Planning and Geographic Information Systems Concentration

The Land Use Planning and Geographic Information Systems Concentration 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. Course work also equips students for facilities planning and management, remote sensing applications in planning, and site location analysis. Course work 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 concentration 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.

Regional Planning—Environmental Planner Concentration

The Environmental Planner Concentration is designed to prepare majors in regional planning for careers as environmental planners or further graduate studies. Students who select this concentration 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 minimal impact on 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 concentration should be able to assist diverse communities and organizations in identifying and finding solutions to a wide variety of environmental issues such as wastewater treatment, water pollution, acid rain, watershed planning, carbon footprints, deforestation, and natural resource extraction.

Regional Planning Minor

A minor in 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 this field relevant. A minor consists of 18 credits in courses taken with the RGPL prefix. The department suggests students take the core in this program if graduate study is anticipated.

Regional Planning Honors Programs

The honors program is open by departmental permission to regional planning majors with at least a 3.25 GPA in total university course work and a 3.25 GPA in regional planning courses. After completing 45 credits of university course work, all qualified majors will be invited to join the Regional Planning Honors Track.

Students select one of the following options: (1) Two courses from RGPL 333, 345, 426, or 440 and two 600-level (graduate seminar) courses, (2) Two courses from RGPL 333, 345, 426, or 440 and one 600-level (graduate seminar) course and RGPL 483 Honors Thesis, (3) Three courses from RGPL 333, 345, 426, or 440 and RGPL 483 Honors Thesis, (4) Three courses from RGPL 333, 345, 426, or 440 and one 600-level (graduate seminar) course. Honors students who enroll in the above designated undergraduate courses will undertake an honors project identified in conjunction with the course instructor and reviewed by the Regional Planning program director or the department chair (if the director is the course instructor).

Bachelor of Science—Regional Planning/Environmental Planner Concentration

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 217 recommended

Social Science: RGPL 103 required

Liberal Studies Electives: 9cr, BTED/COSC/IFMG 101 recommended, no courses with RGPL prefix

College:

Foreign Language Intermediate Level (1) 0-6

Major: 54

Required Courses in Planning:

RGPL 203	Planning History	3cr
RGPL 213	Cartography I	3cr
RGPL 316	Introduction to Geographic Information Systems	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 462	Planning Policy, Implementation, and Administration	3cr
RGPL 468	Planning Theory	3cr
RGPL 493	Internship	3cr

Concentration Courses: Four courses from the following:

GEOG 425	Global Positioning Systems Concepts and Techniques	3cr
GEOG 435	Geography of Energy	3cr
GEOG 444	Energy Development and Compliance I	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

Free Electives: 10-17

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 course work as a requirement for graduation.
-

Bachelor of Science—Regional Planning/Land Use Planning and GIS Concentration

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: 3cr, MATH 217 recommended

Social Science: RGPL 103 required

Liberal Studies Electives: 9cr, BTED/COSC/IFMG 101 recommended, no courses with RGPL prefix

College:

Foreign Language Intermediate Level (1) 0-6

Major: 54

Required Courses in Planning:

RGPL 203	Planning History	3cr
RGPL 213	Cartography I	3cr
RGPL 316	Introduction to Geographic Information Systems	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 462	Planning Policy, Implementation, and Administration	3cr
RGPL 468	Planning Theory	3cr
RGPL 493	Internship	3cr

Concentration Courses: Four courses from the following:

GEOG 334	Political Geography	3cr
RGPL 313	Cartography II	3cr
RGPL 314	Map and Photograph Interpretation	3cr
RGPL 332	Urban Geography	3cr
RGPL 404	Transportation Planning	3cr
RGPL 415	Remote Sensing	3cr
RGPL 420	Technical Issues in Geographic Information Systems	3cr

Free Electives: 10-17

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 course work as a requirement for graduation.
-

Minor—Regional Planning 18

Controlled Electives:

Six RGPL courses (1) 18cr

- (1) Only courses taken as RGPL may be counted toward the minor.
-

Regional Planning Honors Track 12

Prerequisites: Declared major in regional planning, completion of at least 45cr of university course work, 3.25 or higher GPA in major and overall, plus endorsement of advisor and one other Regional Planning faculty member

Select one of the following options:

Two from RGPL 333, 345, 426, and 440 (1) and two 600-level seminars
Two from RGPL 333, 345, 426, and 440 (1) and one 600-level seminar and RGPL 483/H/ (2)

Three from RGPL 333, 345, 426, and 440 (1) and RGPL 483/H/ (2)
Three from RGPL 333, 345, 426, and 440 (1) and one 600-level seminar

- (1) Students in these designated undergraduate courses will undertake an honors project identified in conjunction with the course instructor and reviewed by the Regional Planning program director or the department chair (if the director is the course instructor).
 - (2) Credits for RGPL 483 are counted in the appropriate departmental track requirement.
-

Bachelor of Science in Education—Social Studies Education/Geography Track

The Social Studies Education/Geography Track 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.

Bachelor of Science in Education—Social Studies Education/Geography Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43

Humanities-History: Fulfilled by required courses in major

Mathematics: 6cr

Natural Science: Option II

Social Science: ECON 121, GEOG 102, PSYC 101

Liberal Studies Elective: 3cr, ECON 122, no courses with GEOG prefix

College: 32

Preprofessional Education Sequence:

ACE 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: 24

ANTH 110 Contemporary Anthropology 3cr
 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 Power and Democracy in America 3cr
 PLSC 280 *or* 285 Comparative Government I: Western Political Systems *or* Comparative Government II: Non-Western Political Systems 3cr
 SOC 231 Contemporary Social Problems 3cr

Total Degree Requirements: (2) 120

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog. 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.
- (2) 300-level HIST course strongly recommended to complete a minor in history. Credits would then total 123.

Certificate—Shale, Gas, and Energy 18

Required Geoscience Courses: 6

GEOS 119 Geology of Energy Resources (1) 3cr
 GEOS 409 Geology of Shale Gas Field Workshop 3cr

Required Geography Courses: 6

GEOG 109 Geographic Information Science and Systems for Energy Applications (1) 3cr
 GEOG 409 Spatial Analysis Applications in the Energy Sectors Workshop 3cr

Required Safety Science Courses: 6

SAFE 104 Introduction to Safety in the Natural Gas Industry (1) 3cr
 SAFE 204 Principles of Safety in the Natural Gas Industry 3cr

(1) With departmental permission, one 100-level introductory course may be substituted by an appropriate upper-division course.

Department of History

Website: www.iup.edu/history

R. Scott Moore, Chairperson; Arpaia, Baker, Baumler, Bodle, Botelho, Conlin, Finegan, Franklin-Rahkonen, Lippert, Lu, Mannard, Mazak-Kahne, Schroeder, Wang, Whited; and professors emeriti Bailey, Cashdollar, Cord, Fricke, Gallanar, Hatfield, Landon, Larner, Lehman, Mastro, Oliver, Smith, Wiley

Programs in history are designed to give students an opportunity to study in some depth the past story of peoples and their world. Degree programs offered by the History Department are the bachelor of arts degree program in history and the bachelor of science in education degree program 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 and public relations, 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 bachelor of arts degree program in history are 39 credits in history. Requirements for the bachelor of science in education degree program in social studies, concentrating on history, are a minimum of 30 credits in history within the 57 credits required for social studies certification. For department majors, courses in history in Liberal Studies are applicable only if numbered 300 or higher.

To minor in history, 18 credits of courses with an HIST prefix are required, with at least 6 credits taken at the 300 or higher level and no more than 3 credits taken at the 100 level. No more than 9 transfer credits may be counted toward the minor.

All programs should be planned with an advisor. Every major and concentrate in history will be advised by department faculty members.

Admission to departmental honors, 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: 46-47

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: 39

Required Courses:

HIST 295 Introduction to Historical Studies 3cr

HIST 395 Introduction to Historical Methods 3cr

Controlled Electives:

Three foundation courses from the following: (2) 9cr

HIST 201, 202, 204, 205, 206, 207, 208

Two courses from HIST 494-498 (Topics) (3) 6cr

One non-Western HIST course: Latin America, Africa, Asia,

Middle East, or Russia, 300 or 400 level 3cr

Four additional upper-division history courses 300-498 (4) 12cr

One additional history course 200, 300, or 400 level 3cr

Free Electives: 28-35

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 toward 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.

Bachelor of Arts—History/Pre-law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

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: 39

Required Course:

HIST 295 Introduction to Historical Studies 3cr

HIST 395 Introduction to Historical Methods 3cr

Controlled Electives:

Three foundation courses from the following: (2) 9cr

HIST 201, 202, 204, 205, 206, 207, 208,

Two courses from HIST 494-498 (Topics) (3) 6cr

One Non-Western HIST course: Latin America, Africa, Asia,

Middle East, or Russia, 300 or 400 level 3cr

Four additional upper-division history courses 300-498 (4) 12cr

One additional history course 200, 300, or 400 level 3cr

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, 225, 255

Economics: ECON 121, 122, 332

English: ENGL 212, 227, 265, 310, 321

Philosophy: PHIL 101, 122, 130, 221, 270, 320, 450

Political Science: PLSC 358, 359, 361, 405

Free Electives: 7-23

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 toward 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 electives.

Bachelor of Science in Education—Social Studies Education/History Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43

Humanities-History: Fulfilled by required courses in major

Mathematics: 3cr

Natural Science: Option II

Social Science: ANTH 110, ECON 121, PSYC 101

Liberal Studies Electives: 6cr, ECON 122, GEOG 230, no courses with HIST prefix

College: 35

3 additional credits of MATH 101 level or above 3cr

(in addition to Liberal Studies MATH) (1)

Preprofessional Education Sequence:

ACE 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: 30

Foundation Courses: (2)

HIST 201 Western Civilization before 1600 3cr

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 295 Introduction to Historical Studies 3cr

HIST 395 Introduction to Historical Methods 3cr

HIST 495-498 Topics (3) 3cr

Controlled Electives: 9cr

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: 12

GEOG XXX 200-level or higher GEOG course 3cr

PLSC 111 Power and Democracy in America 3cr

PLSC 280 Comparative Government I: Western Political

Systems *or* Comparative Government II: Non-

Western Political Systems 3cr

SOC 337	Society, Globalization, and Risk <i>or</i>	
<i>or</i> 362	Racial and Ethnic Minorities <i>or</i>	
<i>or</i> 231	Contemporary Social Problems	3cr

Total Degree Requirements: 120

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog. 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 101 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 Track

The honors track 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. All students write an honors thesis, which is completed over two semesters under the direction of a department professor who specializes in the student’s area of interest. The thesis is approved by a thesis committee comprising the director and two other readers, one of whom may come from outside the History Department.

Honors students also take HIST 487 (History Colloquium). With approval of the Honors Director, students may substitute a graduate-level Readings or Seminar (HIST 600 or 601) class or an honors (H) designated 300+ history class for HIST 487. All Honors history courses count toward the major.

Students interested in the History Honors Track 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 (1)	6cr
HIST 487	Honors Colloquium in History	3cr

- (1) Two semesters, 3cr each

Certificate in Digital History

Introduces skills that will prepare students to research, discover, preserve, and present history through digital and news media. Completion of the 18-credit certificate will enable students to pursue careers in education, virtual archive management, public history, and multimedia productions.

Certificate—Digital History 18

Core Courses:		9
One History course numbered 250 or below		3cr
One History course numbered 300 or above		3cr
HIST 379	History in the Digital Age	3cr
COMM 240	Communications Graphics	3cr
COMM 249	Basic Audio Recording Techniques	3cr
COMM 271	Beginning Photography	3cr
COMM 306	2-D Digital Game Development	3cr
COMM 330	Instructional Design for Training and Development	3cr
COMM 374	Documentary Photography	3cr

COMM 440	Multimedia Production	3cr
COMM 449	Advanced Audio Recording Techniques	3cr

Certificate in Public History

Prepares students for careers in the collection, preservation, and presentation of information about the past to the general public. This 18-credit certificate complements majors in related fields such as anthropology, communications media, and education. Completion of the certificate will prepare students to pursue positions in libraries, museums, archives, national parks, heritage sites, media, and corporations.

Certificate—Public History (1) 18

Core Courses:

HIST 204	United States History to 1877 <i>or</i>	
<i>or</i> 205	United States History Since 1877	3cr
HIST 420	Introduction to Public History	3cr

Controlled Electives:

Two Public History courses from HIST 421, 422, or 423		6cr
OR		
One Public History course from HIST 421, 422, or 423 <i>and</i>		
a 3cr internship		6cr

Electives:

- Two 300-level or higher History
- (1) No Public History courses (HIST 420, 421, 422, or 423) may be counted toward the BSEd—Social Studies Education/History Track. Only one may be counted toward the BA—History or the BA—History/Pre-law Track.

Department of Journalism and Public Relations

Website: www.iup.edu/journalism

Michele Papakie, Chairperson; Jesick, Lauber, Loomis, Miller, Mukasa; and professors emeriti DeGeorge, Furgieule, Heilman, Truby

A bachelor of arts degree with a major in journalism and public relations at IUP prepares students to thrive in a wide variety of career fields, such as news media, public relations, entertainment, magazines, advertising, visual journalism, online journalism, web design, marketing, and social media.

In addition to these traditional, journalistic career fields, department graduates combine their outstanding communication skills with other fields about which they are passionate and land jobs in hospitals, hotels, politics, advocacy, sports, and planning, just to name a few, where strategic communication is essential.

This major’s curriculum is flexible enough to allow students to pick up a second major, or a minor or two, and still graduate within four years. This is how journalism and public relations majors differentiate themselves in the workforce.

With six required courses (18 credits), students are empowered to individualize their degrees specifically in line with their interests and passions. Students choose six more major electives (18 additional credits), out of the 24 (72 credits) the department offers, to complete the major requirements.

All journalism and public relations students are required to pass a basic-writing-skills test before completing the degree. Students may make as many scheduled attempts as needed to pass the test with a grade of 70 percent or better.

Students in the College of Humanities and Social Sciences are also required to reach the intermediate level of a foreign language, which typically translates to three semesters (12 credits) of the student’s choice of a foreign language. These requirements make journalism and public relations graduates more marketable.

For students who choose to major in something else at IUP, the department offers an 18-credit minor that complements any major.

Successful alumni of this program represent a network of professionals throughout communications industries. This network assists students who seek internships, which are plentiful and strongly encouraged. These practical experiences often lead to job opportunities after graduation. Employers know, if students can communicate professionally, they can succeed.

Students who choose to study journalism and public relations at IUP graduate as accomplished communicators. Study with the Journalism and Public Relations Department, and you will learn to change the world with your words.

Course Sequence

First Semester:	JRNL 102 and 105
Second Semester:	JRNL 220 plus one journalism and public relations elective (100- or 200-level)
Third Semester:	JRNL 328 and 347
Fourth Semester:	One journalism and public relations elective (200- or 300-level)
Fifth Semester:	One journalism and public relations elective (300- or 400-level)
Seventh Semester:	JRNL 400 plus one journalism and public relations elective (300- or 400-level)
Eighth Semester/Summer:	JRNL 493 Internship (6cr)

The Journalism and Public Relations faculty offers the following operational policy for the course sequence and prerequisites.

1. Majors must complete JRNL 102, 105, 220, and 328 before completing 21cr in journalism and public relations.
2. Eighteen credits must be at the 300- and 400-level.
3. No more than 6cr of special topics courses in journalism and public relations may count toward the 34cr required for the major.
4. Required courses requiring a grade of "C" or better may be retaken two times each. If a student fails to achieve a grade of "C" or better on the second attempt, he/she must meet with his/her advisor.
5. Students are advised to examine course prerequisites so their plan of study can be most effective. Exceptions can be made to the prerequisites only by the faculty member teaching the course after extensive consultation with the student to ascertain his/her readiness to succeed in that course. In the case of the required courses, that decision will be made by the department as a whole.
6. Seventy-two of the 120 credits required for graduation must be outside Journalism and Public Relations (JRNL) and Communications Media (COMM) and within the Colleges of Fine Arts, Humanities and Social Sciences, and Natural Sciences and Mathematics. Credits beyond the 48cr of combined JRNL and COMM courses will be in addition to the 120cr required for graduation. This requirement applies to dual majors.

Bachelor of Arts—Journalism and Public Relations

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: 3cr

Social Science: 9 cr, no courses with JRNL prefix to program requirements

Liberal Studies Electives: 9cr, no courses with JRNL or COMM prefix

College: 0-6
Foreign Language Intermediate Level (1, 7)

Major: 34

Required Courses:

JRNL 102	Basic Journalistic Skills (2, 5)	3cr
JRNL 105	Journalism and the Mass Media (2)	3cr
JRNL 220	Writing for Media (2)	3cr
JRNL 328	News Reporting (2, 5)	3cr
JRNL 347	Journalism Law and Ethics	3cr
JRNL 400	Professional Preparation	1cr

Controlled Electives:

Other JRNL courses (as listed in this catalog) (3, 6) 18cr

Other Requirements: 0

Department recommends a planned program of dual major, minor(s), or electives (4)

Free Electives: 30-37

Total Degree Requirements: 120

- (1) Intermediate-level foreign language may be included in Liberal Studies electives.
- (2) A grade of "C" or better is required for graduation with a degree in journalism and public relations.
- (3) A maximum of 6cr of internship can be applied to major.
- (4) Seventy-two of the 120 credits required for graduation must be outside Journalism and Public Relations (JRNL) and Communications Media (COMM) and within the Colleges of Fine Arts, Humanities and Social Sciences, and Natural Sciences and Mathematics. Credits beyond 48cr of combined JRNL and COMM courses will be in addition to the 120cr required for graduation. This requirement applies to double majors.
- (5) Course is not eligible for transfer from any other institution.
- (6) The last 15cr in journalism and public relations must be taken at IUP.
- (7) The foreign language requirement applies to all double majors.

Minor—Journalism and Public Relations (1) 18

Required Courses:

JRNL 102	Basic Journalistic Skills (1)	3cr
JRNL 105	Journalism and the Mass Media (1)	3cr
JRNL 120	Journalistic Techniques for Professional Writing (2)	3cr

Controlled Electives:

JRNL course of 300-level or higher	3cr
JRNL course of 300-level or higher	3cr
JRNL free elective	3cr

- (1) A grade of "C" or better is required for graduation with a minor in journalism and public relations.
- (2) JRNL 102 is a prerequisite for JRNL 120.

Department of Philosophy

Website: www.iup.edu/philosophy

Mary C. MacLeod, Chairperson; Pedersen, Rives, Rubenstein; and professors emeriti Begres, Boone, Bouffard

The discipline of philosophy involves sustained, rigorous focus on some of the deepest questions human beings ask, questions about the nature of reality, thought and consciousness, the scope and limits of human knowledge, the value and essence of art, and the foundations of ethics and justice. Philosophy distinguishes itself by its methods: unpacking concepts, questioning beliefs, evaluating arguments, and examining the methods and assumptions of other disciplines, including natural science, social science, law, and fine arts. Interdisciplinary focus is inherent in philosophy, and most courses offered by the department are designed to be accessible to a broad range of students, not just those majoring in philosophy.

Students of philosophy learn to read carefully, think independently, communicate clearly, argue cogently, spot fallacies, clarify muddled reasoning, and identify questionable assumptions. Surveys show that such critical reasoning and analytical writing skills are those most sought by potential employers. Standardized exams for graduate, business, and law school test for such skills, and the data demonstrate that philosophy majors do extraordinarily well on them. Historically, according to Educational Testing Service data, philosophy majors outperform all other majors on both the Verbal Reasoning section and the Analytical Writing section of the Graduate Record Exam (GRE).

Two degree programs are available: a bachelor of arts degree program in philosophy and a bachelor of arts degree program in philosophy/pre-law. A Philosophy minor is also offered. The Philosophy BA is best suited to students intending a broad education in philosophy. Some philosophy majors earn advanced degrees and pursue academic careers, but most pursue

careers in law, medicine, public service, business, or information technology. The Philosophy/Pre-law Track is designed for students intending to pursue an advanced degree in law and provides ideal training in the skills required for close, critical reading of legal texts, a fact borne out by law school admissions rates and LSAT performance data.

A significant number of students interested in exploring interdisciplinary connections choose philosophy as a second major, both for its flexibility and the new perspective it provides on the primary major. Course work in metaphysics (PHIL 420), the philosophy of science (PHIL 330), and the theory of knowledge (PHIL 421) deepens students' understanding of the methods and assumptions of natural science and social science. Course work in the history of ideas deepens students' appreciation of the Western intellectual tradition and their understanding of academic pursuits, generally (PHIL 324, 325, 326, and 410). Course work in ethics (PHIL 122) and political philosophy (PHIL 323) provides orientation for work in social science, business, law, criminology, or safety science. Philosophers also take a distinctive perspective on aesthetic questions of interest to fine arts majors (PHIL 223) and questions about the nature of the mind of interest to psychology majors (PHIL 360).

Honors in Philosophy

The department offers students an opportunity to graduate with honors in philosophy. The option is encouraged for students intending to pursue graduate or advanced professional degrees. Philosophy majors and philosophy/pre-law majors may be invited to apply or may nominate themselves. In either case, to be considered for Honors in Philosophy, students must have earned at least 60 credits in total, with a minimum 3.25 cumulative GPA and a minimum 3.5 GPA in philosophy courses. Honors in Philosophy requires completion of a two-semester, 6-credit, Honors Thesis Independent Study. The honors thesis is completed individually under the direction of a department professor who specializes in the student's area of interest and is approved by a thesis committee comprising the director and two other readers. To determine how honors will be integrated into existing requirements for the philosophy or philosophy/pre-law major, students should consult their assigned advisors. Students completing the departmental honors program are recognized at departmental commencement ceremonies.

Bachelor of Arts—Philosophy

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with PHIL prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30

Required Courses:

PHIL 221 Symbolic Logic I 3cr

PHIL 324 Ancient Greek Philosophy 3cr

PHIL 325 Early Modern European Philosophy 3cr

Controlled Electives:

Three PHIL courses (9cr) (with restrictions) (2, 3) 9cr

At least two courses from the following two categories

Knowledge and Reality: 6cr

Six credits from the following:

PHIL 330, 350, 360, 390, 420, 421, 460

Ethics and Values: 6cr

Six credits from the following:

PHIL 223, 232, 240, 270, 320, 323, 326, 450

Free Electives: 34-41

Total Degree Requirements: 120

- (1) Intermediate-level foreign language may be included in Liberal Studies electives.
- (2) In addition to PHIL 221, no more than four 100- and 200-level courses may be counted toward the major. Only PHIL courses may be counted toward the major.

- (3) No more than 9 non-classwork credits may be counted toward the major. Non-classwork 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: 49-50

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with PHIL prefix

College: 0-6
Foreign Language Intermediate Level (1)

Major: 30

Required Courses:

PHIL 221 Symbolic Logic I 3cr

PHIL 324 Ancient Greek Philosophy 3cr

PHIL 325 Early Modern European Philosophy 3cr

Controlled Electives:

Three PHIL courses (9cr) (with restrictions) (2, 3) 9cr

At least two courses from the following two categories

Knowledge and Reality: 6cr

Six credits from the following:

PHIL 330, 350, 360, 390, 420, 421, 460

Ethics and Values: 6cr

Six credits from the following:

PHIL 223, 232, 240, 270, 320, 323, 326, 450

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, 225, 255

Economics: ECON 121, 122, 332

English: ENGL 212, 227, 265, 310, 321

History: HIST 320, 341, 342, 346, 475

Political Science: PLSC 358, 359, 361, 405

Free Electives: 13-26

Total Degree Requirements: 120

- (1) Intermediate-level foreign language may be included in Liberal Studies electives.
- (2) In addition to PHIL 221, no more than four 100- and 200-level courses may be counted toward the major. Only PHIL courses may be counted toward the major.
- (3) No more than 9 non-classwork credits may be counted toward the major. Non-classwork credits include independent study, independent honors project, and internship in philosophy.

Minor—Philosophy 18

Controlled Electives:

Six PHIL courses (with restrictions) (1, 2) 18cr

- (1) No more than three 100- and 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- and 400-level courses require either philosophy major or minor status, junior or senior standing, or permission of the instructor.
- (2) No more than 3 non-classwork credits may be counted toward the minor. Non-classwork credits include independent study, independent honors project, and internship in philosophy.

Honors in Philosophy 6

Required Course:

PHIL 483/H/ Honors Thesis in Philosophy 6cr

Department of Political Science

Website: www.iup.edu/politicalscience

David D. Chambers, Chairperson; Fiddner, Jackson, Perry, Sternfeld, Torges, Wheeler; and professors emeriti Kuffner-Hirt, Morris, Palmer, Platt, Sitton

Political scientists focus on political systems, including the effect of environment on the system, inputs, the decision-making agencies that 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.

Degree programs offered by the Political Science Department are the bachelor of arts degree programs in political science or political science/pre-law. An interdisciplinary major and an International Studies minor are sponsored by the Political Science Department. The department also offers a Political Science minor and a Homeland Security minor.

Bachelor of Arts—Political Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

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 (2) 3cr

PLSC 111 Power and Democracy in America (3) *cr

PLSC 260 Contemporary Political Ideas 3cr

PLSC 300 Research Methods in Political Science 3cr

Controlled Electives: 24cr

At least one course in three of the four areas:

American Studies: PLSC 251, 346, 350, 351, 353, 354, 355, 356, 358, 359

Political Theory: PLSC 360, 361, 362

Public Policy and Administration: PLSC 250, 370, 371

International Studies: PLSC 280, 282, 283, 285, 382, 383, 384, 385, 387, 388, 389, 422, 465 (4)

Free Electives: 34-41

Total Degree Requirements: 120

- (1) Intermediate-level foreign language may be included in Liberal Studies electives.
- (2) PLSC 101 satisfies the global and multicultural awareness 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—Political Science/Pre-law Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46-47

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 (2) 3cr

PLSC 111 Power and Democracy in America (3) *cr

PLSC 260 Contemporary Political Ideas 3cr

PLSC 300 Research Methods in Political Science 3cr

Controlled Electives: 24cr

At least one course in three of the four areas:

American Studies: PLSC 251, 346, 350, 351, 353, 354, 355, 356, 358, 359

Political Theory: PLSC 360, 361, 362

Public Policy and Administration: PLSC 250, 370, 371

International Studies: PLSC 280, 282, 283, 285, 382, 383, 384, 385, 387, 388, 389, 422, 465 (4)

Other Requirements: Pre-law Interdisciplinary Track 21

Seven courses, including at least one from each of six areas:

Business: ACCT 201, ACCT 202, BLAW 235

Criminology: CRIM 210, 215, 225, 255

Economics: ECON 121, 122, 332

English: ENGL 212, 227, 265, 310, 321

History: HIST 320, 341, 342, 346, 475

Philosophy: PHIL 101, 122, 130, 221, 270, 320, 450

Free Electives: 13-20

Total Degree Requirements: 120

- (1) Intermediate-level foreign language may be included in Liberal Studies electives.
- (2) PLSC 101 satisfies the global and multicultural awareness 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: 46-47

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 Power and Democracy in America (2) *cr

PLSC 260 Contemporary Political Ideas 3cr

PLSC 282 International Relations 3cr

PLSC 300 Research Methods in Political Science 3cr

Specializations:

International Political Economy 21cr

Required specialization course: PLSC 422

Six courses from the following: ACCT 471; BCOM 342;

COMM 320; ECON 121, 325, 326, 339, 345, 346, 350;

FSMR 357; GEOG 231, 333; MGMT 350, 451, 454, 459;

MKTG 350, 430; PLSC 361, 383; SOC 337

<i>International Security Studies</i>	21cr
Required specialization course: PLSC 283, 388, or 465	
Six courses from the following: BIOL 117, 119; CRIM 344; ECON 361; GEOG 230, 331, 334, 335, 341; HIST 251, 308, 361, 362; JRNL 375; PLSC 283*, 422, 388*, 465*, RLST 110, 200	
*(if not taken as the required specialization course)	
<i>International Political Systems</i>	21cr
Required specialization course: PLSC 280, 285, or 389	3cr
Six courses from the following: ANTH 271, 272, 273, 274, 370; ASIA 200; ENGL 226, 396, 398, 437, 463; FNLG 100; FRNC 254, 370, 373, 375, 376, 460, 463; GEOG 104, 252, 253, 254, 255, 256, 257, 331; HIST 206, 208, 307, 308, 310, 311, 312, 313, 321, 322, 323, 325, 327, 330, 331, 334, 337, 351, 356; PLSC 280*, 285*, 383, 384, 387, 389*, PNAF 131; RLST 220, 311, 360, 370, 372, 373, 380; SOC 271, 273, 274; SPAN 342, 382, 383, 384, 385, 410, 411, 412	18cr
*(if not taken as the required specialization course)	

Other Requirements: (3)	0
Free Electives:	34-41
Total Degree Requirements:	120
(1) Intermediate-level foreign language may be included in Liberal Studies electives.	
(2) Credits for PLSC 111 are counted in the Liberal Studies social science requirements.	
(3) Majors are strongly encouraged to take advantage of the study abroad opportunities available through IUP departmental programs and of exchange opportunities available through the Office of International Education.	

Minor—Political Science	18
Required Courses:	
PLSC 101 World Politics	3cr
PLSC 111 Power and Democracy in America	3cr
Controlled Electives:	
Four additional PLSC courses, at least two of which must be 300 level or higher	12cr

Minor—Homeland Security	18
Required Courses:	
PLSC 101 World Politics (1)	3cr
PLSC 111 Power and Democracy in America (1)	3cr
PLSC 283 American Foreign Policy	3cr
PLSC/CRIM 344 Terrorism	3cr
PLSC 388 Dimensions of National Security	3cr
PLSC 465 Intelligence Process and Policy	3cr
(1) Must be completed before taking additional courses in the minor.	

Minor—International Studies	18
Required Courses:	
PLSC 101 World Politics	3cr
Controlled Electives:	
Five additional PLSC courses (15cr) from the following, at least two of which must be 300 level or higher:	15cr
PLSC 280, 282, 283, 285, 383, 384, 387, 388, 389, 422, 465	

Department of Religious Studies

Website: www.iup.edu/religiousstudies

Theresa S. Smith, Chairperson; Chandler, Cleopha, Downie, Goulet; and professors emeriti Chan, Ferrara, Lin, Mlecko, Montgomery, Schaub

The Religious Studies program is designed to provide a balanced, non-sectarian, 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.

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 that 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 18 credits with the RLST prefix, including certain required courses. At least 6 credits must be taken at the 300 level or higher.

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.

Bachelor of Arts—Religious Studies

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: 3cr

Liberal Studies Electives: 9cr, no courses with RLST prefix

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: 34-41

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.

Minor—Religious Studies **18**

Core: RLST 100 or 110	3cr
Western: RLST 260, 290, or 380	3cr
Eastern: RLST 220, 311, 370, or 375	3cr
Indigenous: RLST 360 or 365	3cr
Elective: two RLST courses (1)	6cr

(1) At least 6cr must be taken at the 300 level or higher.

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.

Department of Sociology

Website: www.iup.edu/sociology

D. Alex Heckert, Chairperson; Anderson, Bonach, Boser, Duncan, Gunter, Hildebrandt, Mabry, Molina, Sandhoff, Shinberg, Swauger, Vaccaro, Witham; and professors emeriti Ackerman, Darling, Gondolf, Heasley, Holtz, Hunter, Nowak, Snyder

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 three tracks: **General Sociology**, **Human Services**, and **Sociology of Disability Services**. 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.

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 **Sociology of Disability Services Track**, specialized major track, 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 or a minor in special education, offered by the Department of Communication Disorders, Special Education, and Disability Services to better prepare them in a multidisciplinary curriculum. Minors are also recommended in psychology or child development and family relations.

The department also prepares teachers for secondary school social studies with a concentration in sociology. The program leads to the bachelor of science in education degree. 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, and Sociology of Disability Services.

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 declared GPA in sociology courses. Students who are considering attending graduate school are encouraged to apply to the honors program. Students complete two 500, 600, or 700 Sociology (SOC) master's-level courses and 6 credits of SOC 483. Students may not repeat 500 dual-level courses if the student has already taken the course at the 400-level. Students must meet graduate school requirements before enrolling in graduate-level courses. Students should be aware that, in accordance with university policy, graduate-level courses taken for the Honors Track cannot later be applied toward an IUP graduate program. SOC 320 is a prerequisite for enrollment in graduate classes and thesis credits. Pending approval, a student may substitute up to two honors courses for one or two of the graduate-level courses. Students must earn at least a grade of "B" in each course completed for the track and must maintain a 3.25 cumulative GPA. 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. Sociology majors who have met the eligibility requirements must submit an application to the chairperson of the Department of Sociology after they have earned at least 60 credits, but prior to their senior year. Students are encouraged to apply for the honors program in the last semester of their sophomore or first semester of their junior year.

Bachelor of Arts—Sociology/General Sociology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-51

Mathematics: MATH 217 recommended

Social Science: SOC 151 or 161

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 <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	*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, 348, 352, 421, 442, 458

Comparative Sociology:

SOC 233, 271, 272, 273, 286, 314, 337, 387, 442

Free Sociology Electives (3) 9cr

Free Electives: 30-38

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: 49-51

Mathematics: MATH 217 recommended

Social Science: SOC 151 or 161 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: 42

Required Courses:

SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	*cr (2)
SOC 320	Sociological Theory	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, 5) 15cr

Medical Sociology: SOC 442, and four courses from the following:

ANTH 222, 444, BIOL 240 or 155, ECON 335, FDNT 212, PSYC 321, 378, SOC 231, 336, 357, 387, 448, 452, 457

Gerontology: SOC 357, and four courses from the following:

ANTH 444, ECON 335, PSYC 312, 378, SOC 231, 251, 336, 352, 357, 387, 442, 448, 457

Juvenile Delinquency: SOC 333, and four courses from the following: CRIM 102, 225, 235, 394, GEOG 230, 231, HIST 374, SOC 231, 269, 335, 336, 345, 361, 362, 387, 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, 333, 335, 336, 345, 361, 362, 363, 387, 427, 428, 448, 452, 457, SOWK 238

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, RGPL 350, SOC 231, 340, 348, 361, 387, 448, 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, 387, 448, 457

Free Electives: 21-29

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 or after the senior year.
- (4) Students may create their own substantive area with the approval of the department chairperson.

- (5) At least four courses in any substantive area must be SOC/SOWK courses.

Bachelor of Arts—Sociology/Sociology of Disability Services Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-51

Mathematics: MATH 217 recommended

Social Science: SOC 151 or 161 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 <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	*cr (2)
SOC 320	Sociological Theory	3cr
SOC 336	Sociology of the Family	3cr
SOC 357	Sociology of Aging and the Life-course	3cr
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr
SOC 442	Medical Sociology	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 (3) 12cr

Suggested Minors or Free Electives: 18-26

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 (4)	18cr
Psychology	18cr

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) The Special Education minor 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: 43-45

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 or 161

Liberal Studies Electives: 6cr, PSYC 310 or 330, no courses with SOC prefix

College: 35
3 additional credits of MATH 100-level or above (in addition to Liberal Studies Mathematics) (1) 3cr

Preprofessional Education Sequence:		
ACE 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: (2) 21

Required Sociology Courses:		
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

Controlled Electives:
 One course on social equity from the following: 3cr
 SOC 361, 362, 363
 Two additional courses: one each from any two of the following 6cr
 three categories:
Deviance and Social Problems:
 SOC 269, 333, 335, 357, 427, 428, 452
Individual in Society: SOC 251, 345
Social Organizations and Institutions: SOC 286, 337, 340, 341, 348, 352, 361, 362, 363, 387, 421, 442, 448, 458

History Distribution 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		
ANTH 211	Cultural Anthropology	3cr
GEOG 230	Cultural Geography	3cr
PLSC 280 or 285	Comparative Government I: Western Political Systems or Comparative Government II: Non-Western Political Systems	3cr

Free Electives: 1-3

Total Degree Requirements: 120

- (*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog. To student teach, students must have a 3.0 cumulative GPA in the major (social science and history courses). To be licensed to teach education/sociology, majors must apply for social studies education certification.
- (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.

Minor—Sociology/Applied Social Research 18

Required Courses:		
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	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
Controlled Electives:		
Any SOC course approved by department chair		3cr

Minor—Sociology/General Sociology 18

Required Courses:		
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	3cr
SOC 320	Sociological Theory	3cr
Controlled Electives:		
One course from the following: SOC 361, 362, 363		3cr
Three additional courses in SOC/SOWK, at least one of which must be 300 level or above		9cr

Minor—Sociology of Disability Services 18

Required Courses:		
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	3cr
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr
SOC 442	Medical Sociology	3cr
SOC 452	Disability and Society	3cr
Controlled Electives:		
One course from the following: SOC 336, 357		3cr

Minor—Sociology/Human Services 18

Required Course:		
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	Foundations of Sociology: Social Relations in Groups and Organizations	3cr
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr
Controlled Electives:		
One course from the following: SOC 320, 361		3cr
Two additional courses in SOC/SOWK, at least one of which must be 300 level or above		6cr

Sociology Honors Track 12

Prerequisites: Declared major in sociology and completion of 60cr, SOC 320, and 12 additional credits in SOC		
Required Courses:		
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. Snavely, Dean

Aleksandra B. Kaniasty, Assistant Dean

Daniel A. Burkett, Dean's Associate for Academic Affairs

Website: www.iup.edu/natsciandmath

We change lives through science and math. Our graduates change the world as educators, scientists, and leaders.

We change lives through:

- opportunities to explore, create, and innovate,
- team-based problem-solving in teaching and learning,
- interdisciplinary scientific research, and
- challenges that inspire individual achievement.

These four mission objectives encompass the College of Natural Sciences and Mathematics' (CNSM) approach for education of its students now and in the future. New scientific and mathematical methods often arise through an integration of qualitative and quantitative concepts to identify patterns and processes. Thus, progress in the natural sciences and mathematics is maximized through interdisciplinary-collaborative teams built on separate and specific knowledge and approaches of their respective disciplines. Scientific endeavors increasingly depend on this integrative approach that includes interconnecting scientific theory, experimentation, and simulation. Solutions to the problems facing future generations will involve ever larger and more complex databases capturing information of ever finer resolution. The college's graduates become responsible lifelong learners, applying lessons learned in the natural sciences and mathematics to their professional and personal lives, changing the world as educators, scientists, and leaders.

Degrees Offered

- Biochemistry
- Biology (Tracks available: Cell and Molecular; Ecology, Conservation, and Environmental Biology; Environmental Health; Pre-medical; Pre-veterinary; Honors)
- Biology Education
- Chemistry (Tracks available: Interdisciplinary Chemistry, Pre-medical, and Pre-pharmacy)
- Chemistry Education
- Computer Science (Tracks available: Cyber Security, Languages and Systems, Software Engineering)
- Earth and Space Science Education
- Environmental Engineering
- Geology (Tracks available: Geology, Energy Resources, Environmental)
- Mathematics (Tracks available: Actuarial, Applied)
- Mathematics Education
- Natural Science (Tracks available: Pre-audiology, Pre-chiropractic, Pre-dentistry, Pre-optometry, Pre-pharmacy, Pre-physical Therapy, Pre-physician Assistant, Pre-podiatry)
- Physics (Tracks available: Applied Physics, Nanomanufacturing Technology, Pre-engineering)
- Physics Education
- Psychology (Track available: Honors)
- Public Health (Tracks available: Environmental and Occupational Health, Behavioral and Mental Health, and Epidemiology and Biostatistics)

Degree Requirements

In addition to the university's Liberal Studies requirements, all students seeking a baccalaureate degree in the CNSM 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.

Degrees

The departments of Biology, Chemistry, and Computer Science offer work leading to either a bachelor of science or a bachelor of arts degree, depending on the specific course program pursued. The bachelor of science degree is awarded for successful work in the departments of Geoscience, Mathematics, Natural Science, and Physics. The bachelor of arts degree is awarded by the Department of Psychology.

Several departments in the college sponsor master of science, or professional science master's 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.

Minors

Each department in the college offers a minor in their discipline. In addition, departments in the college participate in cross-disciplinary minors in Child and Adult Advocacy Studies (CAAST), Effective Teamwork and Communication, Sustainability Studies, Forensic Biosciences, and Cyber Security. The requirements for all minors are in the college and departmental sections that follow.

The Foreign Language Requirement

Several programs require some level of foreign language competency. See individual program requirements for more information.

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.

Internship Programs

Several departments in the CNSM 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.

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 audiology, dentistry, pharmacy or pharmacology, optometry, podiatry, chiropractic medicine, physician assistant 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.

Cooperative Programs

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to 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

ensure 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, Palmer Chiropractic College, Sherman College of Straight Chiropractic, Parker College of Chiropractic, 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.
- **Jefferson Medical College, Physician Shortage Area Program** (See Department of Biology): The program 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 BS 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 Scholars Program**: This program enables the college to identify students with primary care potential and to provide these students with the opportunity to interact with primary care faculty, physicians, and medical students at the Pennsylvania State University College of Medicine for one week during the summer.*
- **Philadelphia College of Osteopathic Medicine (PCOM)** (See Department of Biology): PCOM has established this “3+4” Early Acceptance program with IUP. The program will enable students who have demonstrated academic excellence and a commitment to the practice of medicine to gain a provisional acceptance to PCOM. Students will be awarded a BS degree with a major in biology from IUP upon successful completion of the first-year curriculum at PCOM and the undergraduate requirements at IUP.*

*Contact the pre-medical advisor, N. Bharathan, for specific information.

Bachelor of Science—Environmental Engineering

Environmental Engineering is a multi-disciplinary program that prepares students to work to minimize the impact of human development and technology on the natural world. Their interests include water purification, pollution control, public health, recycling, waste disposal, and sustainable design and manufacturing. Graduates trained in basic sciences and mathematics will use the principles of engineering, geosciences, chemistry, biology, and physics to develop solutions to environmental problems. This degree program combines a solid grounding in college-level basic sciences and mathematics with environmental engineering and technical courses.

Graduates of the BS program in Environmental Engineering will be qualified to enter the workforce immediately or to further their educations in master’s or doctoral programs. The degree program will prepare students to apply mathematical and scientific principles to the design, development, and operational evaluation of systems for controlling contained living environments and for monitoring and controlling factors in the external natural environment, including pollution control, waste and hazardous material disposal, health and safety protection, conservation, life support, and requirements for protection of special materials and related work environments.

Graduates of this program will possess the technical expertise required to maintain a healthy balance between societal welfare, economic growth, and the environment surrounding us, and will be in demand in the Pennsylvania workforce where the need for environmental engineers is projected to grow faster than other occupations.

Bachelor of Science—Environmental Engineering

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 44

Humanities: PHIL 122

Mathematics: MATH 125

Natural Science: CHEM 111-112 or CHEM 113-114

Social Science: ECON 101; RGPL 103 or GEOG 104

Liberal Studies Electives: 3cr, MATH 126

Major: 58

Required Courses:

BIOL 202	Principles of Cell and Molecular Biology	4cr
GEOS 201	Foundations of Geology	4cr
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 341	Differential Equations	3cr
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

Environmental Engineering Core:

ECON 361	Environmental Economics	3cr
ENVE 101	Introduction to Environmental Engineering	3cr
ENVE 201	Fluid Mechanics	3cr
ENVE 211	Statics and Solid Mechanics	3cr
ENVE 301	Environmental Aquatic Chemistry	4cr
ENVE 311	Water Resources Engineering	4cr
ENVE 461	Water and Wastewater Treatment	3cr
ENVE 471	Solid and Hazardous Waste Management	3cr
ENVE 498	Environmental Engineering Design	3cr
SAFE 435	Ethics and Professionalism	1cr

Free Electives: 18

BIOL 221, 250, 323, 401, CHEM 231, 325, 351, COSC 110, 250, GEOG 316, 415, 419, GEOS 312, IFMG 110, 250, MATH 342, SAFE 310, 361 and foreign language intermediate sequence (6cr) are recommended.

Total Degree Requirements: 120

Bachelor of Science—Public Health

The Bachelor of Science with a major in Public Health will graduate students who will help meet Pennsylvania’s workforce needs in public health and health care related fields, and will help meet the strong demand for trained public health professionals projected by national and regional studies. This degree will prepare students for jobs in health administration, community health, and health education. Upon completion of the program, students will understand the science of human physical and mental health, the epidemiology of infectious and chronic diseases, as well as the complications of the US and global healthcare systems with regard to access and ethics of the disparities in health care delivery. The program offers three concentrations: **Environmental and Occupational Health, Behavioral and Mental Health, and Epidemiology and Biostatistics.**

Bachelor of Science—Public Health/Environmental and Occupational Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications: 46-47

Humanities: PHIL 122 or 130

Mathematics: MATH 217

Natural Science: BIOL 104, 119

Social Science: ANTH 110, PSYC 101, SOC 151		
Liberal Studies Electives: ECON 122, FDNT 145		
Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr
Concentration: Environmental and Occupational Health		23
BIOL 221, 323; CHEM 101, 102; SAFE 330 or 430, 335, 361		
Free Electives: (1)		17-21
Total Degree Requirements:		120
(1) Minor or certificate recommended.		

Bachelor of Science—Public Health/Behavioral and Mental Health Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications:		46-47
Humanities: PHIL 122 or 130		
Mathematics: MATH 217		
Natural Science: BIOL 104, 119		
Social Science: ANTH 110, PSYC 101, SOC 151		
Liberal Studies Electives: ECON 122, FDNT 145		
Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr
GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr
Concentration: Behavioral and Mental Health		18
PSYC 332 and 374; SOC 361 or 362 or 363; SOC 448 and 2 electives		
Free Electives: (1)		22-26
Total Degree Requirements:		120
(1) Minor or certificate recommended.		

Bachelor of Science—Public Health/Epidemiology and Biostatistics Concentration

Liberal Studies: As outlined in the Liberal Studies section with the following specifications:		46-47
Humanities: PHIL 122 or 130		
Mathematics: MATH 121		
Natural Science: BIOL 104, 119		
Social Science: ANTH 110, PSYC 101, SOC 151		
Liberal Studies Electives: ECON 122, FDNT 145		
Public Health Core:		30-33
BIOL 301	Fundamentals of Epidemiology	3cr
ECON 360	Health Economics	3cr

GEOG/ RGPL 316	Introduction to Geographic Information Systems	3cr
NURS 410	Health Promotion and Social Issues	3cr
NURS 455	Health Care Informatics	3cr
NURS/ELR 314	Health Policy and Law	3cr
PUBH 122	Foundations of Public Health	3cr
PUBH 306	Research Design and Analysis in Public Health	3cr
PUBH 493	Internship in Public Health	3-6cr
SOC 442	Medical Sociology	3cr
Concentration: Epidemiology and Biostatistics		23
CHEM 101, 102; FDNT 422; KHSS 472; MATH 216, 411, 412		
Free Electives: (1)		17-21
Total Degree Requirements:		120
(1) Minor or certificate recommended.		

Child and Adult Advocacy Studies (CAAST)

Child and Adult Advocacy Studies is an 18-credit interdisciplinary undergraduate minor. It is designed for current undergraduate students enrolled at IUP. It provides mandated reporters and first responders in criminology, education, family studies, medicine, nursing, psychology, public health, sociology, social work, and other disciplines with evidence-based, culturally relevant knowledge and skills to improve the outcomes for victims and perpetrators of interpersonal violence across the lifespan. A student's major determines which CAAST minor s/he pursues: one minor has been designed for Psychology majors, one minor has been designed for Sociology majors, and one minor has been designed for all other majors.

Minor—Child and Adult Advocacy Studies (CAAST) for Sociology/Human Services Track majors (1, 2, 3) 18

Required Courses:		
PSYC 101	General Psychology	*cr (4)
PSYC 313	Non-normative Development in Adulthood	
<i>or</i> 314	<i>or</i> Child and Adolescent Psychopathology	3cr
PSYC 322	Violence Across the Life Span	3cr
PSYC 332	Community Psychology and Prevention Science	3cr
PSYC 380	Gender and Violence	3cr
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	<i>or</i> Foundations of Sociology: Social Relations in Groups and Organizations	*cr (4)
Controlled Electives:		
Two courses from the following: SOC 357, 427, 428		6cr
(1) Students majoring in Psychology are not eligible to take this minor; instead, they must take the CAAST minor that has been designed for students pursuing a major in Psychology.		
(2) Students who are Sociology/Human Services Track majors can only have two SOC courses that count for their major and the CAAST minor.		
(3) Sociology/General Track majors who wish to get a CAAST minor must take SOC 391 and 392 as part of their free electives.		
(4) Credits counted in Liberal Studies, not in the minor.		

Minor—Child and Adult Advocacy Studies (CAAST) for Psychology majors (1, 2) 18

Required Courses:		
PSYC 101	General Psychology	*cr (3)
PSYC 322	Violence Across the Life Span	3cr
SOC 151	Principles of Sociology <i>or</i>	
<i>or</i> 161	<i>or</i> Foundations of Sociology: Social Relations in Groups and Organizations	*cr (3)
SOC 391	Foundations of Sociological Practice	3cr
SOC 392	Clinical Sociological Practice	3cr

Controlled Electives:

One additional PSYC course from the following: 3cr
 PSYC 313, 314, 332, 380, 493
 Two additional SOC courses from the following: 6cr
 SOC 357, 427, 428

- (1) Students majoring in Sociology/Human Services Track are not eligible to take this minor; instead, they must take the CAAST minor that has been designed for students pursuing a major in Sociology/Human Services Track.
- (2) Students who are Psychology majors can only have two PSYC courses that count for their major and the CAAST minor.
- (3) Credits counted in Liberal Studies, not in the minor.

Minor—Child and Adult Advocacy Studies (CAAST) for majors other than Psychology and Sociology 18**Required Courses:**

PSYC 101 General Psychology *cr (1)
 PSYC 322 Violence Across the Life Span 3cr
 SOC 151 Principles of Sociology *or*
or 161 Foundations of Sociology: Social Relations in
 Groups and Organizations *cr (1)
 SOC 391 Foundations of Sociological Practice 3cr
 SOC 392 Clinical Sociological Practice 3cr

Controlled Electives: (2)

Three additional courses from the following: 9cr
 PSYC 313 *or* 314, 332, 380, SOC 357, 427, 428

- (1) Credits counted in Liberal Studies, not in the minor.
- (2) With the aid of a CAAST minor advisor, students will select classes (a) from both PSYC and SOC, and (b) that will cover the spectrum of violence across the lifespan.

Certificate in Child and Adult Advocacy Studies (CAAST)

The CAAST Certificate is a 12-credit interdisciplinary program designed for individuals who are already working in professional environments and are seeking additional training/knowledge relevant to their work. It provides mandated reporters and first responders in child protection, child advocacy, criminal justice, domestic violence, education, medicine, nursing, older adult protective services, older adult advocacy, psychology, sociology, social work, and other disciplines with evidence-based, culturally relevant knowledge and skills to improve the outcomes for victims and perpetrators of interpersonal violence across the lifespan.

Certificate—Child and Adult Advocacy Studies (CAAST) 12

Prerequisite: Program Coordinator(s) approval

Required Course:

PSYC 322 Violence Across the Life Span 3cr

Controlled Electives:

One additional PSYC course from the following: 3cr
 PSYC 313, 314, 332, 380
 Two additional SOC courses from the following: 6cr
 SOC 357, 427, 428

Effective Teamwork and Communication Minor

The Effective Teamwork and Communication minor is an interdisciplinary program that aims to better prepare students for a competitive job market by instilling interpersonal, teamwork, and communication skills for use in their field. Employers of today seek job candidates who possess a strong set of technical skills, but strongly prefer someone who can also work in a team environment. Ninety percent of employers believe that team skills are equally or even more important than technical skills when hiring. This minor provides students with ways to stand out from the crowd.

The addition of the minor is practical for all majors, particularly those programs with few free electives. The minor draws expertise from appropriate

faculty across the university to introduce and relate in-demand teamwork attributes to core foundation theories of communication, leadership, sociology, and theater. Students further develop their teamwork and communication skills as they solve current, real-world problems in in-major projects within their required classes. The direct connections of the liberal courses and in-major course work minimizes the course load for students who wish to enhance their education and future job prospects and emphasizes the application of a liberal studies education.

The course work of the minor will expose students to understanding how their beliefs, attitudes, and actions affect the team as well as how the diversity of the team adds strength and additional perspective to solve complex problems facing society. Students will learn how to engage audiences with nontechnical and technically rich content, frame and present arguments, and develop the ability to speak about their work and its significance. Traits of good team members and leaders will be examined. Capstone projects, coupled with required in-major courses, provide a direct opportunity for students to develop their skills within their chosen field. Students will reflect on the personal qualities and attributes they bring to a team and prepare materials that best illustrate these skills to future employers.

Minor—Effective Teamwork and Communication 18-20**Required Courses:**

COMM 261 Teamwork and Communication Skills for
 College and Career (1) 3cr
 LDSP 361 Introduction to Leadership 3cr
 SOC 161 Foundations of Sociology: Social Relations in
 Groups and Organizations (2, 3) 3cr
 THTR 161 Introduction to Theater: Interpersonal
 Practices (4) 3cr

Interdisciplinary Teamwork Course: (5)

3-4
 One course approved as a Teamwork-Intensive section (T-Course)
 course. 3-4cr

Capstone Courses: (6)

2-3
 TMWK 461 Teamwork and Communication in Research (7) 1cr
 And one to two credits of independent study, honors thesis, or
 undergraduate research (8) 1-2cr

- (1) COMM 261 counts as a Liberal Studies Elective in Oral Communication and Information Literacy requirements.
- (2) SOC 161 counts toward the Liberal Studies Social Science requirement.
- (3) SOC 161 and 151 are interchangeable for pass/repeat. SOC 161 is required for the minor.
- (4) THTR 161 counts toward the Liberal Studies Fine Arts requirement. THTR 161 and 101 are interchangeable for pass/repeat. THTR 161 is required for the minor.
- (5) Any teamwork-intensive course can count towards a student's minor. Students are encouraged to take a teamwork-intensive course that is a required course or elective in their major.
- (6) Students need a minimum 6cr of 300- and 400-level course work. This requirement is completed using one of the two following approaches:
 1) LDSP 361 and a 3cr 300- or 400-level teamwork intensive course or
 2) LDSP 361, TMWK 461, and 2cr of a 300- or 400-level independent studies/honors thesis/undergraduate research.
- (7) TMWK 461 is a required course for the minor. The independent studies/honors thesis/undergraduate research course is a co-requirement (or may be taken as a prerequisite) for TMWK 461.
- (8) Students who take a 3cr teamwork-intensive course need 2cr of independent study, honors thesis, or undergraduate research.

Sustainability Studies Minor

Jonathan Warnock, College Contact

The Sustainability Studies minor is an interdisciplinary program that draws from expertise across the university. The program conceptualizes "sustainability" as an interdisciplinary approach to knowledge production and action that focuses on "the health and integrity of human societies and the

natural world.” Sustainability is classically defined as a stool with three legs—the social, the economic, and the environmental; the purpose of this program is to address the challenges of sustainability by balancing the humanities, social sciences, and natural sciences. The minor equips students to broaden their thinking about the origins of sustainability problems and possible solutions to include human institutions, ethics and cultures, as well as technologies and natural sciences. In so doing, the minor aims to foster student agency with regard to research on sustainability, responsibility to both human and non-human life, and civic engagement with local sustainability projects. The minor can supplement all majors in the university. Career possibilities include positions in design, law, food industries, planning and architecture, education, building certification, renewable energy, and waste management.

Students must complete 18 credits and a capstone experience (described below) to earn a minor in sustainability studies. The program’s interdisciplinary approach encourages students to take courses from a variety of departments. The program is structured as follows:

1. All students will take SUST 201 Introduction to Sustainability.
2. Students must then take at least 12 credits from Category A, defined as courses in which substantial content is foundational to engagement with sustainability. These credits must be distributed across three “clusters,” each of which denotes a major aspect of sustainability. Having taken one course from each of the three clusters, students will then be able to take the remaining Category A credits from a cluster of their choosing.
3. Only 3cr may come from Category B, defined as courses in which significant content is foundational to engagement with sustainability. Because their content may vary, courses from Category B must be approved by the program director to count for the minor.
4. At least 6cr must be at the 300 level or above.
5. Only one course may come from the student’s major.
6. With the exception of SUST courses, no course prefix may be used more than twice without written permission from the program director.
7. Special topics, independent study courses, and internship courses may be applied to either Category A or Category B with the approval of the Sustainability Studies Committee.
8. Students should consult with the program director to determine if there are any prerequisites for the courses. Through counseling, the program coordinator will work with individual departments to determine if students may qualify for prerequisite exemptions.
9. Students will work with an advisor from the Sustainability Studies program to develop a capstone experience that synthesizes their knowledge and skills related to sustainability. This requirement may be fulfilled by one of the following options: a portfolio, conference presentation, or other scholarly activity approved by the program director.

Minor—Sustainability Studies 18

Required course: 3

SUST 201 Introduction to Sustainability 3cr

Category A 12-15

Cluster I: Ethics, Culture, and Society

ANTH 420 Environmental Anthropology 3cr
 ANTH 430 Anthropology of Food 3cr
 ENGL 361 Environmental Literature 3cr
 HIST 385 People in Nature 3cr
 PHIL 270 Ethics and the Environment 3cr
 RLST 365 Native North American Religions 3cr

Cluster II: Natural Sciences and Environmental Stewardship

BIOL 103 Life on Earth 4cr
 BIOL 114 Environmental Science 3cr
 BIOL 115 Biotic Diversity of North America 3cr
 BIOL 201 Principles of Ecology and Evolution 4cr
 BIOL 221 Environmental Health and Protection 4cr
 BIOL 272 Conservation of Plant and Animal Resources 3cr
 BIOL 450 Field Biology at Pymatuning Laboratory of Ecology 4cr
 BIOL 490 Field Studies in Biology 3cr
 GEOS 101 The Dynamic Earth 3cr

GEOS 103 Oceans and Atmospheres 3cr
 GEOS 310 Environmental Geology 4cr
 GEOS 370 Oceanography 4cr
 PHYS 101 Energy and Our Environment 3cr
 PSYC 331 Environmental Psychology 3cr

Cluster III: Environmental Policy, Economics, and Law

CRIM 374 Environmental Crime and Justice 3cr
 ECON 361 Environmental Economics 3cr
 FDNT 470 Human Food Consumption Patterns 3cr
 GEOG/RGPL 103 Global Cities: Issues in Planning and Development 3cr
 GEOG 104 World Geography: Global Context 3cr
 GEOG/RGPL 343 Geography of Fresh Water Resources 3cr
 GEOG/RGPL 345 Biogeography for Environmental Managers 3cr
 GEOG/RGPL 440 Conservation: Environmental Analysis 3cr
 MKTG 444 Green Marketing 3cr
 RGPL 426 Environmental Land Use Planning 3cr

Category B 0-3

ANTH 110, 213, 314, 444, ART 113, 213, BIOL 323, 362, 456, 460, ECON 338, 339, 365, GEOG 230, 435, GEOS 150, 152, 201, 324, JRNL 375, 466, KHSS 143, NURS 143, PHIL 122, PLSC 250, 389, PSYC 330, RLST 485, SOC 314, 337, 340, 417

Biochemistry Program

Website: www.iup.edu/biochemistry

Coung Diep and Jana Villemain, Co-coordinator; N. Bharathan, S. Bharathan, Ford, Hinrichsen, Irani, Jain, Ko, Kyler, Luciano, Majumdar, Ruby, Southard, Widzowski; and professors emeriti Butler, Harding, Sowa

The BS degree program in biochemistry is a four-year degree curriculum offered as a cooperative program by the Biology and Chemistry departments. This program also offers the Biochemistry minor.

The curriculum leading to a BS 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. Completion of one chemistry course as a controlled elective allows students the option to receive a biochemistry degree certified by the American Chemical Society.

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: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126, no courses with BIOC prefix

Major: 52

Required Courses:

BIOC 301 Foundations of Biochemistry 3cr
 BIOC 302 Advanced Biochemistry 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 (1)	1cr
BIOC 481	Special Topics in Biochemistry	3cr
BIOC 482	Independent Research in Biochemistry	2cr
BIOC 490	Biochemistry Seminar II (1)	1cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 250	Principles of Microbiology	4cr
CHEM 111	General Chemistry I <i>or</i>	
<i>or</i> 113	Advanced General Chemistry I	4cr
CHEM 112	General Chemistry II <i>or</i>	
<i>or</i> 114	Advanced General Chemistry II	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 323	Analytical Methods	4cr
CHEM 341	Physical Chemistry I	4cr

Controlled Electives:

Two courses chosen from any 300- or 400-level BIOC/BIOL/CHEM courses or CHEM 214 (2), MATH 216 or 225 or COSC 110 6-8

Free Electives:

16-18

Total Degree Requirements:

120

- (1) 1cr each semester of senior year.
- (2) CHEM 214 must be taken to qualify for an ACS certified degree.

Minor—Biochemistry

18-20

Total credits will depend on the controlled electives used (9cr minimum required to 12cr for three 4cr electives).

Required Courses:

8

BIOC 301	Foundations of Biochemistry (1a)	3cr
BIOC 302	Advanced Biochemistry	3cr
BIOC 311	Biochemistry Laboratory I (1a)	1cr
BIOC 312	Biochemistry Laboratory II	1cr

Other Requirements:

10-12

- At least three controlled electives from following: (1) BIOC 480, 481, 490, BIOL 203 (1b), 250 (1b, d), 352 (1d), 364 (1d), BIOC/BIOL 401 (1d), CHEM 232 (1c), 322, (1c, d), 325
- (1) Or other 200-level or higher biology or chemistry courses with permission of chairperson of offering department. A minimum of 10cr is required.
 - a. BIOL 202 and CHEM 232 are prerequisites.
 - b. Required for biology major
 - c. Required for chemistry major
 - d. These courses have prerequisites not needed for the required courses.

Department of Biology

Website: www.iup.edu/biology

Narayanaswamy Bharathan, Chairperson; S. Bharathan, Bi, Brenneman, Diep, Duchamp, Hinrichsen, Irani, Janetski, Knoch, Larkin, Luciano, Major, Morschhauser, Nealen, Pistole, Ruby, Simmons, Townsend, Travis, Tyree, Widzowski, Yerger; and professors emeriti Andrew, Butler, Gallati, Hulse, Humphreys, Kesner, Newell, Linzey, Lord, Moore, Schrock

Degree programs offered by the Department of Biology are the bachelor of science degree program in biology, the bachelor of arts degree program 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 Communications. The department also offers minors in Biology and Biomedical Science.

BS—Biology

In addition to the bachelor of science degree with no specialization, the department also offers these specialized bachelor of science tracks: 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 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 program in biology with no specialization is designed to provide maximum depth in the sciences and mathematics, 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.

BA—Biology

The bachelor of arts degree program 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, pre-law, or psychology.

BS—Biology/Cell and Molecular Biology Track

Students electing the bachelor of science degree with an emphasis in cell and molecular biology 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.

BS—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. 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 (Applied Statistics, Geology, Geography, Regional Planning, and Sustainability). 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.

BS—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 having an impact on 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.

BSEd—Secondary Biology

The Department of Biology, in conjunction with the College of Education and Communications, 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.

Minors—Biology and Biomedical Science

These minors are intended for students in the Nursing and Allied Health or Natural Science programs. Not for biology majors.

Minor—Forensic Biosciences

The goal of this interdisciplinary minor is to provide students with a broad-based understanding of the field of forensic biosciences. The minor allows students to gain both a deep understanding of a traditional discipline through their major field of study while gaining experience with various aspects of forensic biology and criminal investigations. It is not designed to provide students necessarily with the methods and measures of forensics, which will come from student's undergraduate fields of study and/or future graduate study. The purpose is to give students an understanding of the basic issues and the applications of those methods within the context of forensic biology.

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 12 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- or 600-level BIOL 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 course work is designated on university transcripts. Students completing the departmental honors program are recognized at departmental commencement ceremonies.

Accelerated MS Track

The department 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 MS 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 BS—Biology and MS—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 *Graduate Catalog* or contact the Biology Department graduate coordinator for more information.

Certificate in Cell and Molecular Biology

For students who wish to obtain specialized training in cell and molecular biology without electing the major track, the department 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 Jefferson Medical College, Lake Erie College of Osteopathic Medicine, and Pymatuning Laboratory of Ecology.

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 increasing the distribution of physicians practicing in underserved areas of Pennsylvania. To be eligible for this special program, students must be from, or have spent a significant amount of time living in, a non-urban area. Students interested in this program should enroll as biology/pre-medical majors.

This program will admit approximately four graduates of IUP and 20 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. 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 and Lake Erie College of Osteopathic Medicine. These programs allow qualifying students to gain provisional acceptance into the medical college as long as they maintain a GPA of 3.4 or better in the Biology/Pre-medical curriculum at IUP and score 25 or higher on the MCAT with no score lower than 7 on any section. These programs are also known as "3+4" programs, since students 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 their three years of undergraduate requirements at IUP and the first-year curriculum at LECOM or PCOM.

To be considered for either of the "Early Acceptance" programs, students must be in the top 25 percent of their graduating class, have a minimum SAT score (Math + Verbal) of 1170 or a minimum ACT score of 26, 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: 44-45

Mathematics: MATH 121 or 217

Natural Science: CHEM 111-112 or CHEM 113-114

Liberal Studies Elective: 3cr, no courses with BIOL prefix

Major: 33

Required Core Courses:

BIOL 201 Principles of Ecology and Evolution 4cr

BIOL 202 Principles of Cell and Molecular Biology 4cr

BIOL 203 Principles of Genetics and Development 4cr

Controlled Electives:

Biology electives (major courses only) (1) 21cr

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, 401, 480, 490

CHEM 231, 232, 325, 326, 351

GEOS 201, 202, 203, 303, 310, 311, 312, 313, 351, 352, 353, 354, 362, 370, 371

MATH 122, 417, 418

PHYS 112, 122, 151, 161

PSYC 290, 291, 315, 331, 341, 342 or 345, 350, 355, 356, 359, 372

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 (5) 0-6cr

Exit survey for assessment purposes

Free Electives: 12-20

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 Mathematics 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 at 200-level and above (excluding Liberal Studies courses) in the above departments may be substituted with permission of the advisor and the Biology Department chairperson in advance of taking the course.
- (4) Recommended complementary fields include anthropology, art, business, chemistry, communications media, computer science, criminology, dietetics, economics, English, foreign language, geography, geoscience, journalism and public relations, mathematics, philosophy, physics, political science, psychology, regional planning, or safety science. Some courses in complementary field may also fulfill Liberal Studies requirements (see Liberal Studies section). However, if complementary field selected is chemistry, geoscience, mathematics, physics, or psychology, courses used to fulfill other requirements above may not be applied to the complementary field requirement of 15cr. Students are encouraged to seek additional interdisciplinary connections not listed here.
- (5) (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students 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, 415, 417.

Bachelor of Science—Biology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45

Mathematics: MATH 121

Natural Science: CHEM 111-112 or CHEM 113-114

Liberal Studies Elective: 3cr, no courses with BIOL prefix

Major: 36

Required Core Courses:

BIOL 201 Principles of Ecology and Evolution 4cr

BIOL 202 Principles of Cell and Molecular Biology 4cr

BIOL 203 Principles of Genetics and Development 4cr

Controlled Biology Electives:

Biology electives (major courses only) (1) 24cr

One course from each area: Cell and Molecular Area, Ecology Area, Organismal Area (A list of courses in each area is available on the Biology Department website or at the Biology office.) A minimum of 12cr must be in courses at the 400 level.

Other Science Requirements: 23

MATH 216 Probability and Statistics for Natural Sciences 3cr

or 217 Probability and Statistics

PHYS 111 Physics I Lecture 3cr

PHYS 121 Physics I Lab 1cr

Ancillary Science Electives: 16cr

An additional 16cr from the following (2): 16cr

BIOC 301, 302, 311, 312, 401, 480, 490

CHEM 231, 232, 321, 323, 351

GEOS 201, 202, 203, 303, 310, 311, 312, 313, 351, 352, 353, 354, 362, 370, 371

MATH 122, 417, 418

PHYS 112, 122, 151, 161

PSYC 290, 291, 315, 331, 341, 342 or 345, 350, 355, 356, 359, 372

Other Requirements: 0-6

Foreign Language Intermediate Level (3) 0-6 cr

Exit survey for assessment purposes

Free Electives: 10-16

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) Other appropriate major courses at 200 level and above (excluding Liberal Studies courses) in the above departments may be substituted with permission of the advisor and the Biology Department chairperson in advance of taking the course.
- (3) (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).

Bachelor of Science—Biology/Cell and Molecular Biology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45

Mathematics: MATH 121

Natural Science: CHEM 111-112 or CHEM 113-114

Liberal Studies Elective: 3cr, no courses with BIOL prefix

Major: 37

Required Core Courses:

BIOL 201 Principles of Ecology and Evolution 4cr

BIOL 202 Principles of Cell and Molecular Biology 4cr

BIOL 203 Principles of Genetics and Development 4cr

Required Biology Courses:		
BIOL 123	Perspectives in Cell and Molecular Biology	1cr
BIOL 401	Laboratory Methods in Biology and Biotechnology	3cr
BIOL 405	Biology of the Cell	3cr
BIOL 410	Molecular Biology Topics	3cr
BIOL 466	Virology	3cr
BIOL 499	Research Biology/BIOL 493 Biology Internship/ BIOL 482 Independent Study/ BIOL 483 Honors Thesis Independent Study	3cr
Controlled Biology Electives: (1)		9cr
BIOL 240, 250, 262, 269, 271, 281 (2), 310, 323, 331, 352, 362, 363, 364, 453, 460, 477, 481 (2), 482 (2), 483, 484, 493 (2), or other biology major courses by permission of advisor and department chairperson		
Other Science Requirements:		23
Organic Chemistry Sequence:		
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
Biochemistry Sequence:		
BIOC 301	Foundations of Biochemistry	3cr
BIOC 302	Advanced Biochemistry	3cr
BIOC 311	Biochemistry Laboratory I	1cr
BIOC 312	Biochemistry Laboratory II	1cr
Other Science/Mathematics Requirements:		
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
MATH 216	Probability and Statistics for Natural Sciences	3cr
or 217	Probability and Statistics	

Other Requirements:	0-6
Foreign Language Intermediate Level (3)	0-6 cr
Exit survey for assessment purposes	

Free Electives:	9-15
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) No more than 3cr may count toward Controlled Elective requirements.
- (3) (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).

Bachelor of Science—Biology/Ecology, Conservation, and Environmental Biology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	45	
Mathematics: MATH 121		
Natural Science: CHEM 111-112 or CHEM 113-114		
Liberal Studies Elective: 3cr, MATH 216 or 217		
Major:	39-40	
Required Core Courses:		
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
Required Biology Courses:		
BIOL 205	Ecological Methods	3cr
BIOL 210	Botany	3cr
BIOL 220	General Zoology	3cr
BIOL 272	Conservation of Plant and Animal Resources	3cr
BIOL 362	Ecology	3cr
BIOL 451	Evolution	3cr

BIOL 490	Field Studies in Biology <i>or</i>	3-4cr
or 450	Field Biology at Pymatuning Laboratory	

Controlled Biology Electives:	6cr
Biology major courses only (1)	

Other Science Requirements:		20
GEOS 201	Foundations of Geology	4cr
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
Controlled Electives: (2)		12cr

Select 12cr from the following (cannot include Liberal Studies Elective, or courses counting toward Other Requirements): ANTH 222, 250, 420; BIOC 301, 302, 311, 312; BIOL (majors courses only); CHEM 231, 232, 325, 326, 351; COSC 105, 110, 210, 310, 341; CRIM 374; ECON 122, 361; GEOG 331, 419, 425, 435; GEOG/RGPL 213, 231, 313, 314, 316, 341, 342, 343, 345, 415, 420, 440, 464; GEOS 202, 203, 302, 303, 310, 311, 312, 324, 352, 353, 370, 371; MATH 122, 171, 309, 341, 342, 363, 411, 412; PHIL 270, 330; PHYS 112, 122, 231; PSYC 330, 331; RGPL 350, 426; SAFE 310; SUST 201

Other Requirements:	0-6
Course sequence in one of the following areas (may not be counted toward Ancillary Courses):	
1) Foreign Language: one course at Intermediate Level or two semesters beyond placement.	
2) Computer Science: Select two from the following: COSC 105, 110, 210.	
3) Geography/Regional Planning: Select two from the following: GEOG/RGPL 213, 314, 415, 420.	

Free Electives:	9-16
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Total Degree Requirements:	120
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- (1) No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.
- (2) Other appropriate BIOL courses at 200-level and above (excluding Liberal Studies courses) in the above departments may be substituted with permission of the advisor and the Biology Department chairperson in advance of taking the course.

Bachelor of Science—Biology/Environmental Health Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45

Mathematics: MATH 121

Natural Science: CHEM 111-112 or CHEM 113-114

Social Science: ECON 101, PSYC 101 or SOC 151 or 161

Liberal Studies Elective: 3cr, BTED/COSC/IFMG 101, no courses with BIOL prefix

Major:	41
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Required Core Courses:		
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr

Required Biology Courses:		
BIOL 220	General Zoology	3cr
BIOL 221	Environmental Health and Protection	4cr
BIOL 240	Human Physiology	4cr
BIOL 250	Principles of Microbiology	4cr
BIOL 323	Introduction to Toxicology and Risk Assessment	3cr
BIOL 460	Fundamentals of Environmental Epidemiology	3cr
Controlled Biology Electives: (1)		8cr
BIOL 310, 466, 481, 482, 483, 484, 493, or other biology major courses by permission of advisor and department chairperson		

Other Science Requirements:		19
CHEM 231	Organic Chemistry I	4cr
CHEM 351	Biochemistry	4cr

MATH 216	Probability and Statistics for Natural Sciences	3cr	PHYS 112	Physics II Lecture	3cr
or 217	Probability and Statistics		PHYS 122	Physics II Lab	1cr
PHYS 111	Physics I Lecture	3cr	Other Requirements: (2) 0-6		
PHYS 121	Physics I Lab	1cr	Foreign Language Intermediate Level 0-6 cr		
Ancillary Science and Technical Electives: (2) 4cr			Exit survey for assessment purposes		
CHEM 232, 325			Free Electives: 9-15		
GEOG/RGPL 415, 417, GEOG 419, 425			Total Degree Requirements: 120		
GEOS 201, 202, 312, 313			(1) No more than 6cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.		
MATH 122			(2) (a) Two courses in one language, including the placement course; or		
PHYS 112, 122			(b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).		
PSYC 290, 291, 315, 331, 341, 342 or 345, 350, 355, 356, 359, 372					
SAFE 330, 430					
Other Requirements: 0-6					
Foreign Language Intermediate Level (3) 0-6cr					
Exit survey for assessment purposes					
Free Electives: (4) 9-15					
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) Other appropriate major courses at 200 level and above (excluding Liberal Studies courses) in the above departments may be substituted with permission of the advisor and the Biology Department chairperson in advance of taking the course.					
(3) (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).					
(4) Recommended free electives: MGMT 310; PLSC 250, 370; SAFE 101, 220.					
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Bachelor of Science—Biology/Pre-medical Track					
Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45					
Mathematics: MATH 121					
Natural Science: CHEM 111-112 or CHEM 113-114					
Liberal Studies Elective: 3cr, no courses with BIOL prefix					
Major: 37					
Required Core Courses:					
BIOL 201	Principles of Ecology and Evolution	4cr			
BIOL 202	Principles of Cell and Molecular Biology	4cr			
BIOL 203	Principles of Genetics and Development	4cr			
Required Biology Courses:					
BIOL 240	Human Physiology	4cr			
BIOL 250	Principles of Microbiology	4cr			
BIOL 331	Animal Developmental Biology	3cr			
BIOL 402	Advanced Human Anatomy	4cr			
Controlled Biology Electives: (1) 10cr					
BIOL 200, 210, 221, 242, 271, 310, 323, 352, 364, 401, 405, 410, 460, 466, 475, 477, 481, 482, 483, 484, 491, 493, 499, or other biology major courses by permission of advisor and department chairperson					
Ancillary Science Requirements: 23					
CHEM 231	Organic Chemistry I	4cr			
CHEM 232	Organic Chemistry II	4cr			
CHEM 351	Biochemistry	4cr			
MATH 216	Probability and Statistics for Natural Sciences	3cr			
or 217	Probability and Statistics				
PHYS 111	Physics I Lecture	3cr			
PHYS 121	Physics I Lab	1cr			
PHYS 112	Physics II Lecture	3cr			
PHYS 122	Physics II Lab	1cr			
Other Requirements: (2) 0-6					
Foreign Language Intermediate Level 0-6 cr					
Exit survey for assessment purposes					
Free Electives: 9-15					
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) (a) Two courses in one language, including the placement course; or (b) intermediate level. In lieu of a foreign language, students may elect to take a sequence of two courses in either computer science, exclusive of COSC 101 (COSC 110 and 210 recommended), or two courses in geography/regional planning (from the following: GEOG/RGPL 213, 314, 316, 415, 417).					

Bachelor of Science in Education—Biology (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 48

Mathematics: MATH 110 (1)

Natural Science: CHEM 111-112 or CHEM 113-114

Social Science: PSYC 101

Liberal Studies Electives: 7cr, MATH 217, GEOS 201, no courses with BIOL prefix

College of Education: 31**Preprofessional Education Sequence:**

ACE 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: 28

Required Courses:

BIOL 201 Principles of Ecology and Evolution 4cr

BIOL 202 Principles of Cell and Molecular Biology 4cr

BIOL 203 Principles of Genetics and Development 4cr

Required Biology Course:

BIOL 480 Biology Seminar 1cr

Controlled Electives: 15cr

Biology electives: (major courses only) (2)

One course from each area: Cell and Molecular Area, Ecology Area, Organismal Area (A list of courses in each area is available on the Biology Department website or at the Biology office.) A minimum of 6cr must be in courses at the 488 level. At least one course must be a field biology course.

Other Science Requirements: 12

CHEM 231 Organic Chemistry I 4cr

CHEM 351 Biochemistry (3) 4cr

PHYS 151/161 Medical Physics Lecture and Lab 4cr

Other Science Requirements:

Exit survey for assessment purposes

Free Electives: 1

(#) **Total Degree Requirements:** 120

(*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Communications section of this catalog.

(1) MATH 121 may be substituted for MATH 110.

(2) No more than 3cr total from Independent Study, Special Topics, or Internship applies to major; excess applied as free electives.

(3) 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.

Biology Honors Track 9

BIOL 484 Honors Seminar (1) 2cr

BIOL 483 Honors Thesis/Independent Study (1, 2) 4cr

BIOL 5XX/6XX Graduate-level course (3) 3cr

(1) May be counted toward the BA, BS, and BSEd in Biology programs.

(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.

Minor—Biology 18**Required Courses:** (1, 2) 8

BIOL 103 Life on Earth 4cr

BIOL 104 Human Biology: How the Human Body Works 4cr

BIOL 106 Human Genetics and Health 4cr

Additional BIOL courses (3, 4) 10

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) Student must take two of the three required courses.

(2) Two of the following courses may be substituted for the required courses: BIOL 201, 202, or 203.

(3) With approval of department chairperson.

(4) At least six of the 10 required additional BIOL cr must come from 300-level or higher courses.

Minor—Biomedical Science 18

Required Courses: 12

BIOL 150 Human Anatomy 4cr

BIOL 240 Human Physiology 4cr

BIOL 241 Introductory Medical Microbiology 4cr

Controlled Electives: (1) 6

6 credits from the following:

BIOL 310, 323, 364, 405, 410, 460, 466, or 477

(1) Other BIOL content courses with the approval of the minor advisor.

Minor—Forensic Biosciences (1) 19-20

Foundation Courses: (all majors) 12

BIOL 107 Introduction to Forensic Biology 3cr

BIOL 211 Investigative Biological Forensics 3cr

BIOL 313 Forensic Analysis of DNA 3cr

CHEM 105 The Forensic Chemistry of CSI 3cr

Required Course: 4

BIOL 411 Forensic Biology Laboratory Operations 4cr

Controlled Elective: 3-4

One course from the following: ANTH 488, 491, BIOL 103, 104, 105, 106, 115, 323, 364, 493, PSYC 388

(1) Must have formal Biology Department approval to be admitted to the minor in Forensic Biosciences.

Certificate—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: 3

One course from the following: BIOL 323, 364, 460, 481

Department of Chemistry

Website: www.iup.edu/chemistry

Anne Kondo, Chairperson; Ashe, Elcesser, Fair, Ford, Jain, Ko, Kupchella, Kyler, Lake, LeBlond, Long, Maicaneanu, Majumdar, McElroy, See, Southard, Tang, Villemain; and professors emeriti Briggs, Costa, Crumm, Harding, Marks, McKelvey, Patsiga, Ramsey, Scroton, Sowa, Syty, Varghese, Zambotti

Degree programs offered by the Department of Chemistry are the Bachelor of Science (BS) with a major in Chemistry and the Bachelor of Science in Education (BSEd) with a major in Chemistry. Additionally, Pre-medical, Pre-pharmacy, and Interdisciplinary Tracks are available in the BS program. Preparatory programs for other professional schools can also be developed, using the Interdisciplinary Track, and a minor in Chemistry is offered.

Chemistry is a field that has historically enjoyed very strong career possibilities. Many students are employed directly after their undergraduate education by the chemical, pharmaceutical or related industries, in jobs that have excellent career prospects. Graduate school in chemistry or biochemistry usually includes very generous financial support, and can lead to outstanding career paths in industry, government or academic areas. These opportunities are available to students completing any of the degree programs offered by the Department of Chemistry, and graduates of these programs have gone on to industrial leadership positions, and some of the most prestigious graduate programs in the country.

The BS degree with a major in Chemistry is designed for a student intending a career in chemistry and is certified by the American Chemical Society. The advanced courses and strong laboratory component in this degree program gives the student excellent preparation for the challenges of employment or graduate school.

The Pre-medical and Pre-pharmacy Tracks of the BS degree allow students to take all courses required for entrance into their intended professional health program, and gives them the flexibility to tailor their program to meet their individual needs. Students in these tracks retain the option of: (a) attending medical or pharmacy school, (b) attending graduate school in chemistry, biochemistry, pharmacology, or a variety of medically-related PhD programs, (c) employment in the chemistry or pharmaceutical industry. Additionally, the flexibility of these tracks allows students to change the focus of their degree program during their undergraduate experience.

The curriculum leading to the BS—Interdisciplinary Chemistry Track 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. The Interdisciplinary Chemistry Track can also provide excellent preparation for entrance into a variety of professional schools, including law school—students considering this path should work closely with their advisor to choose courses appropriate to meet professional school requirements. This degree may 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 with a major in chemistry. The Interdisciplinary Chemistry Track can incorporate a minor from almost any other field in the university; some disciplines that make useful combinations include art, biology, business administration, computer science, criminology (forensic science), English (technical writing), geoscience, government, and physics. In particular, a student seeking a career in forensic science should major in chemistry.

The curriculum leading to the BSEd—Chemistry is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified course work and the requirements of the teacher certification process, the student is eligible for Pennsylvania certification by the Pennsylvania Department of Education.

Bachelor of Science—Chemistry

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126

Major: 50

Required Courses:

CHEM 111	General Chemistry I <i>or</i>	
<i>or</i> 113	Advanced General Chemistry I	4cr
CHEM 112	General Chemistry II <i>or</i>	
<i>or</i> 114	Advanced General Chemistry II	4cr
CHEM 214	Intermediate Inorganic Chemistry	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 290	Chemistry Seminar I	1cr
CHEM 325	Analytical Chemistry I	4cr
CHEM 326	Analytical Chemistry II	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 390	Chemistry Seminar II	1cr
CHEM 411	Advanced Inorganic Chemistry	3cr
CHEM 490	Chemistry Seminar III	1cr
CHEM 498	Problems in Chemistry	2cr
BIOC 301	Foundations of Biochemistry	3cr

Controlled Electives:

At least 3cr from CHEM or BIOC at or above the 300 level 3cr

Other Requirements: 10

BIOL 202 Principles of Cell and Molecular Biology 4cr

MATH 225 Calculus III/Physics, Chemistry, Mathematics 3cr

One course from the following: MATH 171, 216, or 341 3cr

Free Electives: 16

Total Degree Requirements: 120

Bachelor of Science—Chemistry/Interdisciplinary Chemistry Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125 (1)

Natural Science: PHYS 111-121 and 112-122 or 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126 (1), no course with CHEM prefix

Major: 35-37

Required Courses:

CHEM 111	General Chemistry I <i>or</i>	
<i>or</i> 113	Advanced General Chemistry I	4cr
CHEM 112	General Chemistry II <i>or</i>	
<i>or</i> 114	Advanced General Chemistry II	4cr
CHEM 214	Intermediate Inorganic Chemistry	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 290	Chemistry Seminar I	1cr
CHEM 325	Analytical Chemistry I	4cr
CHEM 341	Physical Chemistry I	4cr

Controlled Electives:

CHEM 343 or 390 and 490 (2) 1-2cr

BIOC 301 or CHEM 351 3-4cr

At least 3cr from CHEM or BIOC at or above the 300 level or above (3) 3cr

Other Requirements:	25
BIOL 202 Principles of Cell and Molecular Biology	4cr
One course from the following: MATH 171, 216, 225, or 341	3cr
Minor: (or second major) in a field outside chemistry (4)	18cr
Free Electives:	14-16
Total Degree Requirements:	120
(1) For students transferring into the program, MATH 121 and 122 may be substituted for MATH 125 and 126, respectively.	
(2) Program contains one writing-intensive credit; students need to acquire another W-credit in Liberal Studies, or as a free or controlled elective.	
(3) CHEM 343, 390, and 490 can all be taken, but student still requires at least 1cr additional of CHEM or BIOC courses at the 300 level or above. BIOC 301 and CHEM 351 cannot both be taken.	
(4) A pre-law concentration has been established—information on this and suggested minor programs is available on the chemistry department website. Alternate (non-minor) programs containing at least 18cr are also possible—they must be approved by the advisor and department chair.	

Bachelor of Science—Chemistry/Pre-medical Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	44
Mathematics: MATH 125 (1)	
Natural Science: PHYS 111-121 and 112-122 or 131-141 and 132-142	
Philosophy or Religious Studies: PHIL 122	
Social Science: PSYC 101, SOC 151 or 161 or ANTH 110 or 211 (2, 3)	
Liberal Studies Elective: 3cr, MATH 126 (1), no course with CHEM prefix	
Major:	49
Required Courses:	
CHEM 111 General Chemistry I <i>or</i>	
<i>or</i> 113 Advanced General Chemistry I	4cr
CHEM 112 General Chemistry II <i>or</i>	
<i>or</i> 114 Advanced General Chemistry II	4cr
CHEM 214 Intermediate Inorganic Chemistry	3cr
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II	4cr
CHEM 290 Chemistry Seminar I	1cr
CHEM 325 Analytical Chemistry I	4cr
CHEM 341 Physical Chemistry I	4cr
CHEM 390 Chemistry Seminar II	1cr
CHEM 490 Chemistry Seminar III	1cr
CHEM 498 Problems in Chemistry	2cr
BIOC 301 Foundations of Biochemistry	3cr
BIOC 302 Advanced Biochemistry	3cr
Controlled Electives:	
At least 11 additional credits from the following: (2, 3, 4)	11cr
BIOC 311, 312, 481, BIOL 150, 240, 241, 250, 331, CHEM 326, 331, 342, 343, 344, 411, 481, MATH 225	
Other Requirements:	11
BIOL 202 Principles of Cell and Molecular Biology	4cr
BIOL 203 Principles of Genetics and Development	4cr
MATH 216 Probability and Statistics	3cr
Free Electives:	16
Total Degree Requirements:	120
(1) For students transferring into the program, MATH 121 and 122 may be substituted for MATH 125 and 126, respectively.	
(2) The application requirements of specific schools of medicine may result in the need to take additional courses. Students should be aware of the requirements at each program in which they are interested, and plan to take courses accordingly to meet these requirements.	

- (3) Students enrolled at an accredited school of medicine after three years at IUP may count the following toward the requirements for the Bachelor of Science—Chemistry/Pre-medical Track: 3cr of Liberal Studies social science; 11cr of required CHEM courses (see below); 13cr of free electives (total 27cr). Upon completing the first year of medical school, students electing this option are not required to take CHEM 214, 325, and 341. If these CHEM courses are taken, they may be counted toward the controlled elective requirement.
- (4) To qualify for an ACS-certified degree in chemistry, students must take BIOC 311, CHEM 343, and two courses from the following list: BIOC 481, CHEM 326, 331, 342, 411, or 481.

Bachelor of Science—Chemistry/Pre-pharmacy Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	44
Mathematics: MATH 125 (1)	
Natural Science: PHYS 111-121 and 112-122 or 131-141 and 132-142	
Philosophy or Religious Studies: PHIL 122	
Social Science: PSYC 101 and ECON 101 or 122 (2, 3)	
Liberal Studies Elective: 3cr, MATH 126 (1), no course with CHEM prefix	
Major:	49
Required Courses:	
CHEM 111 General Chemistry I <i>or</i>	
<i>or</i> 113 Advanced General Chemistry I	4cr
CHEM 112 General Chemistry II <i>or</i>	
<i>or</i> 114 Advanced General Chemistry II	4cr
CHEM 214 Intermediate Inorganic Chemistry (3)	3cr
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II	4cr
CHEM 290 Chemistry Seminar I	1cr
CHEM 325 Analytical Chemistry I (3)	4cr
CHEM 341 Physical Chemistry I (3)	4cr
CHEM 390 Chemistry Seminar II	1cr
CHEM 490 Chemistry Seminar III	1cr
Controlled Electives: (2, 3, 4)	19cr
At least 19cr, consisting of:	
(1) BIOC 301 and 302 (6cr) <i>or</i> CHEM 351 (4cr)	
(2) Courses from the following: BCOM 321 or ENGL 310, BIOC 311, 312, 481, BIOL 150, 240, 241, 250, CHEM 326, 331, 342, 343, 344, 411, 481, 498, MATH 225	
Other Requirements:	11
BIOL 202 Principles of Cell and Molecular Biology	4cr
BIOL 203 Principles of Genetics and Development	4cr
MATH 216 Probability and Statistics	3cr
Free Electives: (2, 3)	16
Total Degree Requirements:	120
(1) For students transferring into the program, MATH 121 and 122 may be substituted for MATH 125 and 126, respectively.	
(2) The application requirements of specific schools of pharmacy may result in the need to take additional courses. Students should be aware of the requirements at each program in which they are interested, and plan to take courses accordingly to meet these requirements.	
(3) Students enrolled at an accredited school of pharmacy after three years at IUP may count the following toward the requirements for the Bachelor of Science—Chemistry/Pre-pharmacy Track: 3cr of Liberal Studies social science; 11cr of required CHEM courses (see below); 13cr of free electives (total 27cr). Upon completing the first year of pharmacy school, students electing this option are not required to take CHEM 214, 325, and 341. If these CHEM courses are taken, they may be counted toward the controlled elective requirement.	
(4) To qualify for an ACS-certified degree in chemistry, students must take BIOC 311 and CHEM 498. Additionally, they must take three lecture courses and one lab course from the following list: BIOC 302, 312,	

481, CHEM 326, 331, 342, 343, 411, or 481. CHEM 326 and 411 count as both a lecture and a lab course

CHEM 112	General Chemistry II <i>or</i>	4cr
<i>or</i> 114	Advanced General Chemistry II	
CHEM 231	Organic Chemistry I	4cr
At least 7cr from the following: CHEM 214, 232, or any CHEM or BIOC course(s) at the 300 level or above		7cr

Bachelor of Science in Education—Chemistry (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 111-121 and 112-122 or 131-141 and 132-142

Social Science: PSYC 101

Liberal Studies Elective: 3cr, MATH 126, no course with CHEM prefix

College: 31

Preprofessional Education Sequence:

ACE 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: 36-37

Required Courses:

CHEM 111	General Chemistry I <i>or</i>	4cr
<i>or</i> 113	Advanced General Chemistry I	
CHEM 112	General Chemistry II <i>or</i>	4cr
<i>or</i> 114	Advanced General Chemistry II	
CHEM 214	Intermediate Inorganic Chemistry	3cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 325	Analytical Chemistry I	4cr
CHEM 341	Physical Chemistry I	4cr
CHEM 343	Physical Chemistry Laboratory I	1cr
CHEM 390	Chemistry Seminar II (1)	1cr
CHEM 498	Problems in Chemistry (1, 2)	1cr

Controlled Electives: (2)

BIOC 301 or CHEM 351		3-4cr
At least 3cr additional CHEM or BIOC at or above the 300 level		3cr

Other Requirements: 8

BIOL 202	Principles of Cell and Molecular Biology	4cr
GEOS 201	Foundations of Geology	4cr

Free Electives: (1) 0-1

Total Degree Requirements: 120

(*) See requirement leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

- (1) Program contains one writing-intensive course (CHEM 343); students need to acquire another W-course in Liberal Studies or as an elective.
- (2) Students in the Chemistry Education program who wish to earn an ACS-certified degree in chemistry must take 2cr of CHEM 498, including a written report, and complete at least 7cr, including two lab courses, of CHEM or BIOC at or above the 300 level.

Minor—Chemistry 19

Required Courses:

CHEM 111	General Chemistry I <i>or</i>	4cr
<i>or</i> 113	Advanced General Chemistry I	

Department of Computer Science

Website: www.iup.edu/compsci

Francisco E. Alarcón, Chairperson; Ali, Ezekiel, Farag, Fries, O’Neil, Smith; and professors emeriti Shubra, Wolfe

The programs in computer science at IUP lead to the BS or BA 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. The goal is to balance fundamentality and breadth with sufficient supervised practice so that the graduates are productive at the time they graduate but ready and willing to change with the field.

The Computer Science Department, working with its Corporate Advisory Board, has identified objectives of a computer science professional over the length of his/her career (Program Educational Objectives). These Program Educational Objectives can be found on the departmental website, www.iup.edu/compsci.

The department encourages 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 Cyber Security 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/Software Engineering 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),

- work with a variety of software tools in designing and implementing computer-based systems,
- manage activities that are strongly computer-system dependent,
- 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:

- 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,
- develop (a) better languages for communicating with computers and (b) software that takes computer organization into account, and enter graduate studies.

Bachelor of Science—Computer Science/Cyber Security Track

A graduate of this track will be prepared to:

- work with business personnel to implement information security policy,
- work with law enforcement personnel at all levels to prevent information security violations and prosecute those who attack computer systems,
- manage security in network systems,
- increase the public's knowledge of cyber security issues,
- establish procedures that provide information assurance in computer systems for which he/she is responsible,
- contribute to improving secure data communications,
- strengthen the security of application programs.

Bachelor of Arts—Computer Science

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: 3cr, MATH 125 (1)

Liberal Studies Elective: 3cr, MATH 216, no courses with COSC prefix

Major: 39

Core 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

Controlled Electives: 8cr from the following: (2)

COSC/MATH 250, COSC 316 (3), 319, 345, 355, 356, 362, 365, 473 (4), 481 (only sections approved for majors), 482, 493 (4), COSC/IFMG 354, IFMG 455

Upper-Level Electives by Categories: 6cr (5)

Artificial Intelligence: COSC 405

Computer Architecture: COSC 410

Database Management: COSC 444

Distributed Systems: COSC 465

Numerical Methods: COSC 427

Systems Programming: COSC 430, 432

Theory of Languages: COSC 420, 424, 460

Other Requirements: 3

Additional Mathematics:

MATH 309 Discrete Mathematics 3cr

Free Electives: 34-35

Total Degree Requirements: 120

- MATH 125 can be substituted by MATH 121.
- Upper-level electives may be counted as controlled electives. 3cr of Intermediate Level foreign language may be applied toward controlled electives.
- COSC 316 cannot be counted for major credit if a student does a Cyber Security minor.
- Credit for both COSC 320 and 493 may be counted toward the degree, but only one will be counted toward the major requirements. **Note:** Only 3cr of first 6cr of COSC 493 or 6cr of a total 12cr of COSC 493 can be counted toward major. COSC 493 may be selected after completion of sophomore year.
- Select at least two additional courses, from at least two different categories, from the list of upper-level electives.

Bachelor of Science—Computer Science/Software Engineering Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: 3cr, MATH 125 (1)

Natural Science: Must choose option 1 with two labs

Liberal Studies Elective: 3cr, MATH 216, no courses with COSC prefix

Major: 46

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 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
COSC 473	Software Engineering Practice <i>or</i>	3cr
<i>or</i> 493	Internship in Computer Science (2)	

Controlled Electives: 9cr from the following: (3, 5)

COSC/MATH 250, COSC 316, 345, 355, 356, 362, 481 (only sections approved for majors), 482, COSC/IFMG 354, IFMG 455

Upper-Level Electives by Categories: 3cr from the following: (5) 3cr

Artificial Intelligence: COSC 405

Computer Architecture: COSC 410

Database Management: COSC 444

Distributed Systems: COSC 465

Numerical Methods: COSC 427, 451

Systems Programming: COSC 430, 432

Theory of Languages: COSC 420, 424, 460

Other Requirements: 3

Additional Mathematics:

MATH 309 Discrete Mathematics 3cr

Minor: Complete a minor from one of the following areas: 9-20

Cyber Security 12-18cr

Any department in the College of Natural Sciences and

Mathematics 9-20cr

Designated business courses 18cr

Designated economics courses 18cr

Designated communications media courses 18cr

Free Electives: 7-18

Total Degree Requirements: 120

- MATH 125 can be substituted by MATH 121.
- COSC 493 may be selected after completion of sophomore year. **Note:** Only 3cr of first 6cr of COSC 493 can be counted toward controlled electives or 6cr of a total 12cr of COSC 493 can be counted

- toward major. A student who does not complete all 12cr of COSC 493 must take COSC 473.
- (3) Upper-level electives may be counted as controlled electives. 3cr of Intermediate Level foreign language may be applied toward controlled electives.
 - (4) COSC 316 cannot be counted for major credit if a student does a Cyber Security minor.
 - (5) Controlled and upper level electives may not be applied toward more than one track in computer science.

Bachelor of Science—Computer Science/Languages and Systems Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: 3cr, MATH 125 (1)

Natural Science: Must choose Option I

Liberal Studies Elective: 3cr, MATH 126 (1), no course with COSC prefix

Major: 48

Core 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 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

Languages and Systems Required Courses:

COSC 345	Computer Networks	3cr
COSC 432	Introduction to Operating Systems	3cr
COSC 460	Theory of Computation	3cr

Controlled Electives: Select 9-10cr from the following: (5, 6)

COSC 220, 316, 355, 362, 365, COSC/MATH 250 (4)

Upper-Level Electives: Select 6cr from the following: (6)

COSC 405, 410, 420 *or* 424, 430, 465, 473 *or* 493 (2), 481 (as approved for majors)

Other Requirements: 12

Mathematics: A minor in mathematics including the following: 12cr

MATH 171	Introduction to Linear Algebra
MATH 216	Probability and Statistics for Natural Sciences
MATH 225	Calculus III for Physics, Chemistry, and Mathematics <i>or</i> Introduction to Numerical Methods (4)
<i>or</i> 250	
MATH 309	Discrete Mathematics

Free Electives: 15-16

Total Degree Requirements: 120

- (1) MATH 125 and 126 can be substituted by MATH 121 and 122.
- (2) COSC 493 may be selected after completion of sophomore year. **Note:** Only 3cr of first 6cr of COSC 493 or 6cr of a total 12cr of COSC 493 can be counted toward COSC electives.
- (3) MATH 125 and 126 (taken as Liberal Studies requirements) are also counted toward the minor.
- (4) COSC/MATH 250 may be counted as a Computer Science elective or as a part of the Mathematics minor, but not both.
- (5) Upper-level electives may be counted as controlled electives. 3cr of Intermediate Level foreign language may be applied toward controlled electives.
- (6) Controlled and upper-level electives may not be applied toward more than one track in computer science.

Bachelor of Science—Computer Science/Cyber Security Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: 3cr, MATH 125 (1)

Social Science: CRIM 101 (2)

Liberal Studies Elective: 3cr, MATH 216, no courses with COSC prefix

Major: 49

Core 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 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

Cyber Security Required Courses:

COSC 316	Host Computer Security (3, 4, 5)	3cr
COSC 345	Computer Networks	3cr
COSC 356	Network Security (3, 4, 5)	3cr
COSC 473	Software Engineering Practice <i>or</i> Internship in Computer Science (6)	3cr

Controlled Electives: 6cr from the following: (7, 8)

COSC/IFMG 354 Testing and Controlling LANs, COSC 362, 365, IFMG 382

Upper-Level Electives: 3cr from the following: (8)

COSC 427, 429, 432, 454, 465, 482

Minor in Criminology (2) 15

Other Requirements: 3

Additional Mathematics:

MATH 309	Discrete Mathematics	3cr
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Free Electives: 9-10

Total Degree Requirements: 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. Fifteen additional credits of CRIM are required.
- (3) A CNSS 4011 certificate will be granted upon completion of COSC 316, 356, CRIM 321, 323.
- (4) A CNSS 4012 certificate will be granted upon completion of COSC 316, 356, 454, CRIM 321, 323.
- (5) A CNSS 4013 certificate will be granted upon completion of COSC 220, 316, 356, CRIM 321, 323.
- (6) COSC 493 may be selected after completion of sophomore year. **Note:** Only 3cr of first 6cr of COSC 493 can be counted toward controlled electives or 6cr of a total 12cr of COSC 493 can be counted toward major. A student who does not complete all 12cr of COSC 493 must take COSC 473.
- (7) Upper-level electives may be counted as controlled electives. 3cr of Intermediate Level foreign language may be applied toward controlled electives.
- (8) Controlled and upper-level electives may not be applied toward more than one track in computer science.

Minor—Computer Science 18

Required Courses:

COSC 210	Object-Oriented and GUI Programming	3cr
COSC electives (1, 2)		9cr
Upper-Level Electives		6cr

- (1) 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.
- (2) See Computer Science minor advisor for suggestions.

Minor—Cyber Security (1) 18

Required Courses:

COSC 108	Introduction to Programming via Alice (2) <i>or</i>	3cr
<i>or</i> 110	Problem Solving and Structured Programming	
COSC 316	Host Computer Security	3cr
COSC 345	Computer Networks (3) <i>or</i>	
<i>or</i> COSC/IFMG 352	LAN Design and Installation (3)	3cr
CRIM 101	Crime and Justice Systems (4) <i>or</i>	3cr
<i>or</i> 102	Survey of Criminology (4)	
CRIM 321	Cybersecurity and Loss Prevention	3cr
CRIM 323	Cybersecurity and the Law	3cr

- (1) Computer Science/Cyber Security students are not eligible to take this minor; instead, they must take a Criminology minor.
- (2) Computer science majors cannot count COSC 108 or 110; instead, they must take one additional course from the following: CRIM 344, 354, 401.
- (3) Computer science majors cannot count COSC/IFMG 352. Computer science majors must take COSC 345.
- (4) Criminology majors cannot count CRIM 101 or 102; instead, they must take one additional course from the following: COSC 341, 356, 362, 427, 429, 432, 454, 482, IFMG 382. Students must select COSC 356 to receive NSTISSE 4011 Certification.

Department of Geoscience

Website: www.iup.edu/geoscience

Steven A. Hovan, Chairperson; Cercone, Coles, Deardorff, Farnsworth, Lewis, Mount, Warnock; and professors emeriti Clark, Hall, Park, Richardson, Sutton, Taylor

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 the environment.

The Geoscience Department offers a BS 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, the department offers a BSEd degree with a major in Earth and space science education for students who are interested in teaching. The degrees and courses in the 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.

BS—Geology/Geology Track

This 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 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.

BS—Geology/Environmental Track

This track is designed for students who wish to pursue careers in the environmental field. In addition to air and water quality issues, pollution often affects 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.

BS—Geology/Energy Resources Track

This 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 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.

BSEd—Earth and Space Science

This program 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. Course work 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.

Minor in Geology

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.

Bachelor of Science—Geology/Geology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 46

Mathematics: MATH 121

Natural Science: CHEM 111-112 or 113-114

Liberal Studies Elective: 4cr, MATH 122, no courses with GEOS prefix

Major: 58

Geoscience Core:

GEOS 201	Foundations of Geology	4cr
GEOS 202	Quantitative Methods in the Geosciences	2cr
GEOS 203	Surficial Processes	4cr
GEOS 204	Historical Geology	4cr
GEOS 301	Mineralogy	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

Geology Track:

Select two courses from the following: GEOS 302, 345, 362	8cr
Select two courses from the following: GEOS 352, 353, 354, 355	8cr

Ancillary Sciences:	6cr	GEOG 314, 335, 341, 343, 415, 419 MATH 216 or 217 (4), 341 PHYS 121 or 141, 122 or 142, 342 COSC 110, 210, 250, 310, 362
Select two courses from the following: PHYS 111 or 131, PHYS 112 or 132, MATH 216		
Controlled Electives: Select 10cr from the following: (2)	10cr	
One 100-level GEOS course (3)		
Any 300-level GEOS course		
Any 400-level GEOS course		
Foreign Language Intermediate Level		
BIOL 201, 202		
CHEM 231, 232, 325, 326, 341		
GEOG 314, 335, 341, 343, 415, 419		
MATH 216 or 217 (4), 341		
PHYS 121 or 141, 122 or 142, 342		
COSC 110, 210, 250, 310, 362		
Free Electives:	16	
Total Degree Requirements:	120	
(1) Up to 4cr of a summer field camp, internship, field study, or independent study, if approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.		
(2) Any course not applied to the Geology Track may count as a controlled elective if taken in addition to track requirements. Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Six credits of foreign language may count toward controlled elective provided intermediate level is successfully obtained.		
(3) When taken before declaring the major or when specially recommended during freshman orientation/transfer advising for students who must take remedial math courses before enrolling in GEOS 201 and 202		
(4) Cannot be counted as a controlled elective if MATH 216 is applied toward ancillary science requirements.		
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Bachelor of Science—Geology/Environmental Track		
Liberal Studies: As outlined in Liberal Studies section with the following specifications:	46	
Mathematics: MATH 121		
Natural Science: CHEM 111-112 or CHEM 113-114		
Liberal Studies Elective: 4cr, MATH 122, no courses with GEOS prefix		
Major:	58	
Required Courses:		
GEOS 201 Foundations of Geology	4cr	
GEOS 202 Quantitative Methods in the Geosciences	2cr	
GEOS 203 Surficial Processes	4cr	
GEOS 204 Historical Geology	4cr	
GEOS 301 Mineralogy	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	
Environmental Track:		
Select two courses from the following:	8cr	
GEOS 345 Igneous and Metamorphic Petrology		
GEOS 352 Stratigraphy		
GEOS 356 Coastal Geology and Processes		
Select two courses from the following:	8cr	
GEOS 310, 311, 312, 323		
Ancillary Sciences:	6cr	
Select two courses from the following: PHYS 111 or 131, PHYS 112 or 132, MATH 216		
Controlled Electives: Select 10cr from the following: (2)	10cr	
One 100-level GEOS course (3)		
Any 300-level GEOS course		
Any 400-level GEOS course		
Foreign Language Intermediate Level		
BIOL 201, 202		
CHEM 231, 232, 325, 326, 341		
GEOG 314, 335, 341, 343, 415, 419		
MATH 216 or 217 (4), 341		
PHYS 121 or 141, 122 or 142, 342		
COSC 110, 210, 250, 310, 362		
Free Electives:	16	
Total Degree Requirements:	120	
(1) Up to 4cr of a summer field camp, internship, field research study, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.		
(2) Any course not applied to the Energy Resources Track may count as a controlled elective if taken in addition to track requirements. Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may		
<hr/>		
Bachelor of Science—Geology/Energy Resources Track		
Liberal Studies: As outlined in Liberal Studies section with the following specifications:	46	
Mathematics: MATH 121		
Natural Science: CHEM 111-112 or CHEM 113-114		
Liberal Studies Elective: 4cr, MATH 122, no courses with GEOS prefix		
Major:	58	
Required Courses:		
GEOS 201 Foundations of Geology	4cr	
GEOS 202 Quantitative Methods in the Geosciences	2cr	
GEOS 203 Surficial Processes	4cr	
GEOS 204 Historical Geology	4cr	
GEOS 301 Mineralogy	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	
Energy Resources Track:		
Two courses from the following: GEOS 302, 323, 324	8cr	
Two courses from the following: GEOS 352, 353, 355, 362	8cr	
Ancillary Sciences:	6cr	
Select two courses from the following: PHYS 111 or 131, PHYS 112 or 132, MATH 216		
Controlled Electives: Select 10cr from the following: (2)	10cr	
One 100-level GEOS course (3)		
Any 300-level GEOS course		
Any 400-level GEOS course		
Foreign Language Intermediate Level		
BIOL 201, 202		
CHEM 231, 232, 325, 326, 341		
GEOG 314, 335, 341, 343, 415, 419		
MATH 216 or 217 (4), 341		
PHYS 121 or 141, 122 or 142, 342		
COSC 110, 210, 250, 310, 362		
Free Electives:	16	
Total Degree Requirements:	120	
(1) Up to 4cr of a summer field camp, internship, field study, or independent study, if approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.		
(2) Any course not applied to the Environmental Track may count as a controlled elective if taken in addition to track requirements. Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may		

- be applied toward controlled electives. Six credits of foreign language may count toward controlled elective provided intermediate level is successfully obtained.
- When taken before declaring the major or when specifically recommended during freshman orientation/transfer advising for student who must take remedial math courses before enrolling in GEOS 201 and 202
 - Cannot be counted as a controlled elective if MATH 216 is applied toward ancillary science requirements.

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 Processes	
Any 300-level GEOS course		
Any 400-level GEOS course, except GEOS 470 and 480 (1)		

- Only one Geoscience Field Workshop (including prerequisite seminar) can be counted toward the minor.

Bachelor of Science in Education—Earth and Space Science (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 48

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:

ACE 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:

39

Required Courses:

BIOL 201	Principles of Ecology and Evolution	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 Processes	
Any 300-level GEOS course		
Any 400-level GEOS course, except GEOS 470 and 480		
PHYS 112, 122		

Free Electives: 2

Total Degree Requirements: 120

(* See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

Certificate—Shale, Gas, and Energy

18

Required Geoscience Courses:

6

GEOS 119	Geology of Energy Resources (1)	3cr
GEOS 409	Geology of Shale Gas Field Workshop	3cr

Required Geography Courses:

6

GEOG 109	Geographic Information Science and Systems for Energy Applications (1)	3cr
GEOG 409	Spatial Analysis Applications in the Energy Sectors Workshop	3cr

Required Safety Science Courses:

6

SAFE 104	Introduction to Safety in the Natural Gas Industry (1)	3cr
SAFE 204	Principles of Safety in the Natural Gas Industry	3cr

- With departmental permission, one 100-level introductory course may be substituted by an appropriate upper-division course.

Department of Mathematics

Website: www.iup.edu/math

Francisco E. Alarcón, Chairperson; Adkins, Bouchat, Burch, Burkett, Cao, Chrispell, Colen, Dahma, Flowers, Kuo, Lattanzio, Long, Maier, Melnikova, Navaratna, Pararai, Radelet, Reilly, Sharp, Stocker, Stoudt, Walker, Wisloski, Zhang; and professors emeriti Angelo, Baker, Broughton, Buriok, Davis, Donley, Feldman, Gibson, Hartman, Massey, D. McBride, R. McBride, Mitchell, Mueller, Reber, Rettig, Shawer, W. Smith, Stilwell, Woodard

The Department of Mathematics prepares students for work in industry, graduate school mathematics, and teaching. Degree programs offered by the department are the bachelor of science degree program in mathematics and the bachelor of science in education degree program 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 Communications. The department also offers a Mathematics minor, Applied Statistics minor, and Elementary and Middle-Level Mathematics minor.

Bachelor of Science

The program for a mathematics major in the College of Natural Sciences and Mathematics has three options. A student may pursue a degree with a major in mathematics or a degree with a major in mathematics with a concentration in either applied mathematics or actuarial science. Those completing a degree with a major 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. Students in the actuarial science concentration take additional course work in finance and economics, preparing them to complete the first two professional actuarial exams and to pursue employment in the areas of insurance and investment.

Bachelor of Science in Education

The program leading to the BSEd degree 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.

Students interested in the BSEd—Middle-Level Education 4-8/Mathematics specialization should refer to the College of Education and Communica-

tions, Department of Professional Studies in Education, section of the catalog.

Minor in Mathematics

The minor consists of a minimum of 18 credits in mathematics including at least 6 credits from 300-level or higher courses. The minor prepares students for advanced study in areas such as economics, computer science, physics, and other natural sciences. Anyone required to take a year of calculus should consider the Mathematics minor.

A cumulative GPA of at least 2.0 in MATH courses is required for the Mathematics or Applied Statistics minor. No more than 6 credits of overlap can be used for the Mathematics and Applied Statistics minors. Transfer students must take at least three courses from IUP with at least two courses from the IUP Mathematics Department in order to complete a minor.

Minor in Applied Statistics

The Applied Statistics minor consists of 18 credits in mathematics and statistics. It is designed for students who want to apply statistical methodology to investigate real-world problems. The use of statistical software and interpretation of results is heavily emphasized. The minor is created for students from a variety of majors, including those in the natural sciences, social sciences, and business.

Minor in Elementary and Middle-Level Mathematics

The minor consists of 18 credits in Elementary and Middle-Level Mathematics Education. The minor may offer additional preparation for the teaching of elementary and middle mathematics. This minor does not lead to certification and is not open to students majoring in middle-level education 4-8/mathematics.

Bachelor of Science—Mathematics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 125

Liberal Studies Electives: 9cr, no courses with MATH prefix, includes intermediate-level foreign language

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 271	Introduction to Mathematical Proofs I	3cr
MATH 272	Introduction to Mathematical Proofs II	3cr
MATH 341	Differential Equations	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: 3-4cr

MATH 342, 350, 353, 355, 363, 364, 445, 446, 447, 465, 481

Other Requirements: 3

Computer Science:

COSC 110 Problem Solving and Structured Programming 3cr

Foreign Language Intermediate Level (1)

Free Electives: 27-29

Total Degree Requirements: 120

(1) Intermediate-level foreign language may be included in Liberal Studies electives.

Bachelor of Science—Mathematics/Actuarial Track (1, 2)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 125

Social Science: ECON 121

Liberal Studies Elective: ECON 122

Major: 33

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 271	Introduction to Mathematical Proofs I	3cr
MATH 272	Introduction to Mathematical Proofs II	3cr
MATH 341	Differential Equations	3cr
MATH 363	Mathematical Statistics I	3cr
MATH 364	Mathematical Statistics II	3cr
MATH 448	Introduction to Financial Mathematics	3cr
MATH 450	Topics in Applied Computational Mathematics	3cr

Controlled Electives: 15

MATH 416 Time Series Analysis 3cr

One course from the following: MATH 371, 421, 423 3cr

One course from the following: MATH 445 or 446 3cr

One course from the following: MATH 480 or 493 3cr

Computer Science:

COSC/MATH 250 Introduction to Numerical Methods 3cr

Other Requirements: 6-10

Foreign Language Intermediate Level

ECON 356, FIN 320 (3)

Free Electives: 12-17

Total Degree Requirements: 120

(1) Pass SOA Exam P or Exam FM.

(2) "B" or higher grades in course work that carries Validation by Educational Experience (VEE) from the Society of Actuaries (required for SOA credential).

(3) FIN 320 and ECON 356 must be passed with grade of "B" or better.

Bachelor of Science—Mathematics/Applied Mathematics Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 49-50

Mathematics: MATH 125

Liberal Studies Electives: 9cr, no courses with MATH prefix, includes intermediate-level foreign language

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 271	Introduction to Mathematical Proofs I	3cr
MATH 272	Introduction to Mathematical Proofs II	3cr
MATH 341	Differential Equations	3cr
MATH 363	Mathematical Statistics I	3cr
MATH 447	Modeling and Simulation	3cr
MATH 450	Topics in Applied Computational Mathematics	3cr

Controlled Electives: (1)

One course from the following: MATH 371, 421, 423, 427, 476 3cr

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:	18
Computer Science:	
COSC 110 Problem Solving and Structured Programming	3cr
COSC/MATH 250 Introduction to Numerical Methods	3cr
Foreign Language Intermediate Level (3)	
Planned program in complementary field (or minor, requires advisor approval) with at least 6cr in 300/400-level courses	12cr
Free Electives:	10-11
Total Degree Requirements:	120
(1) A student may select courses for a specialized area. <i>Statistics/Actuarial Science:</i> MATH 363, 364, 371, 446 Additionally, a student should minor in applied statistics. <i>Math Analysis/Engineering:</i> MATH 342/447, 371, 423 <i>Operations Research:</i> MATH 371, 421, 445/446, 447	
(2) Three credits 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.	

Bachelor of Science in Education—Mathematics Education (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications:	43-44
Mathematics: MATH 125	
Social Science: PSYC 101	
Liberal Studies Elective: 3cr, no courses with MATH prefix	
College:	31
Preprofessional Education Sequence:	
ACE 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:	6-7
Total Degree Requirements:	120

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

Minor—Applied Statistics 18

Required Courses: 9cr

MATH 214 or 216 or 217
MATH 411 Univariate Data Analysis
MATH 412 Multivariate Statistics

Controlled Electives: 9cr

Select at least 9cr from the following:
MATH 115 or 121 or 125, 363, 364,
CRIM 306, QBUS 215, ECON 356, PSYC 290, 291, or any statistics or quantitative methods course approved by the Applied Statistics advisor. Students majoring in mathematics cannot select MATH 115, 121, or 125 as a controlled elective

Minor—Mathematics 18

Required Courses: 6-8cr

MATH 121 or 125 and MATH 122 or 126

Controlled Electives: (1, 2) 10-12cr

Select the additional 10-12 credits from MATH 250, 309, or any required courses for mathematics majors. One of MATH 411 or 412 is permitted but not both. Must include 6 credits from courses at the 300 level or higher

(1) The following courses are excluded: MATH 100, 101, 105, 110, 115, 214, 217, 417, 418, 480 and courses for the Middle-Level Education 4-8/Mathematics specialization.

(2) No more than 6cr of overlap with the minor in Applied Statistics is permitted.

Minor—Elementary and Middle-Level Mathematics 18

Required Courses: 12cr

MATH 151 Elements of Mathematics I
MATH 152 Elements of Mathematics II
MATH 456 Geometry for Elementary/Middle-Level Teachers
MATH 471 Algebra for Elementary/Middle-Level Teachers

Controlled Electives: (1) 6cr

Select 6cr from the following:
MATH 153, 317, 420, 457, 458, 459, 461 (1)

(1) Other MATH content courses with the approval of the minor advisor.

Natural Science

Website: www.iup.edu/preprofessional

Robert Hinrichsen, Coordinator

The program leading to the BS degree with a major in natural science is designed to prepare students for admission to professional schools—chiropractic, dentistry, optometry, pharmacy, podiatry, physical therapy, physician assistant, and audiology. If they qualify, the BS degree with a major in natural science can be earned by students who are accepted for early admission to professional schools that have an articulation agreement with IUP. In some cases, students interested in obtaining a four-year degree before entering a medical or professional school should enroll in a program leading to a BA or BS 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 BS program 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: 48

Mathematics: MATH 121

Natural Science: CHEM 111-112

Social Science: PSYC 101

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, BTED/COSC/IFMG 101; no courses with SCI prefix

Major: 43

Required Courses:

Biology:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr

Chemistry:

CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
<i>or</i> 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:

Foreign Language Intermediate Level 0-6

Free Electives: 23-29

Total Degree Requirements: 120

Bachelor of Science—Natural Science/Pre-audiology Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45

Mathematics: MATH 121

Natural Science: CHEM 111-112

Social Science: PSYC 101, ECON 101 (or ECON 121)

Writing Intensive: ENGL 222 (this second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.)

Liberal Studies Elective: 3cr, BTED/COSC/IFMG 101; no courses with SCI prefix

Major: 45

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 477	Neurobiology	3cr
EDHL 114	Introduction to Deaf and Hard-of-Hearing Persons	3cr
MATH 216	Probability and Statistics for Natural Sciences <i>or</i> Probability and Statistics	3cr
<i>or</i> 217		
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
SPLP 222	Introduction to Audiology	3cr

SPLP 311	Aural Rehabilitation	3cr
SPLP 312	Advanced Audiology and Hearing Disorders	3cr
SPLP 422	Central Auditory Processing Disorders in the Educational Setting	3cr

Other Requirements:

EDHL 115	Introduction to American Sign Language	3cr
EDHL 215	Intermediate American Sign Language	3cr

Free Electives: (1) 24

Total Degree Requirements: 120

(*) Students accepted for early admission to an accredited post-graduate Doctor of Audiology (AuD) program within the US must complete a minimum 96cr, including all of the program requirements listed above. After completing their first year of professional school studies, the student can transfer back to IUP up to 30cr of their AuD program course work. To then graduate from IUP, the student must send an official copy of their transcripts (and a cover letter) to the IUP office of Transfer Services. They must also contact the dean of the College of Natural Sciences and Mathematics for instructions on applying for graduation.

(1) The student, under consultation with her/his advisor, should select as their free electives courses that are appropriate for their targeted post-graduate AuD programs.

Bachelor of Science—Natural Science/Pre-chiropractic Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 48

Mathematics: MATH 121

Natural Science: CHEM 111-112

Social Science: PSYC 101

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major: 43

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
<i>or</i> 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:

Foreign Language Intermediate Level 0-6

Free Electives: (1) 23-29

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

Total Degree Requirements: 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 KHSS 315 or 345 are recommended.

Bachelor of Science—Natural Science/Pre-dentistry Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 48

Mathematics: MATH 121

Natural Science: CHEM 111-112

Social Science: PSYC 101

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major: 43

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
<i>or</i> 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) 23-29

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

Maximum cr for work at affiliated dental school 30cr

Total Degree Requirements: 120

(*) 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.

(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.

Bachelor of Science—Natural Science/Pre-optometry 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

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major: 43

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
<i>or</i> 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) 23-29

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.

Bachelor of Science—Natural Science/Pre-pharmacy 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

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major: 43

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
<i>or</i> 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) 23-29
 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.

Bachelor of Science—Natural Science/Pre-physical Therapy 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

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major: 43

Required Courses:

BIOL 150	Human Anatomy	4cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II <i>or</i>	
	<i>or</i> 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) 23-29

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

Total Degree Requirements: 120

(*) Accelerated three-year Gannon University School of Physical Therapy program. A maximum of 30cr of work may be transferred after the first year at Gannon University School of Physical Therapy. Upon 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 BS 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-physician Assistant Track (*)

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 45

Mathematics: MATH 121

Natural Science: CHEM 111-112

Social Science: PSYC 101

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, BTED/COSC/IFMG 101, no courses with SCI prefix

Major: 49

Required Courses:

BIOL 200	Medical Terminology	2cr
BIOL 201	Principles of Ecology and Evolution	4cr
BIOL 202	Principles of Cell and Molecular Biology	4cr
BIOL 203	Principles of Genetics and Development	4cr
BIOL 240	Human Physiology	4cr
BIOL 241	Introductory Medical Microbiology	4cr
BIOL 402	Advanced Human Anatomy	4cr
CHEM 231	Organic Chemistry I	4cr
CHEM 232	Organic Chemistry II	4cr
CHEM 351	Biochemistry	4cr
MATH 216	Probability and Statistics for Natural Sciences <i>or</i>	3cr
	<i>or</i> 217 Probability and Statistics	
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr
PHYS 112	Physics II Lecture	3cr
PHYS 122	Physics II Lab	1cr

Other Requirements: 0-4

Foreign Language through Intermediate Level

Free Electives: (1) 22-26

Total Degree Requirements: 120

(*) Students accepted for early admission to an accredited post-graduate Physician Assistant (PA) program within the United States must complete at minimum 90cr, including all of the program requirements listed above. After completing the first year of professional school studies, the student can transfer back to IUP up to 30cr of the PA program course work. To graduate from IUP, the student must send an official copy of their transcripts (and a cover letter) to the IUP Office of Transfer Services. The student must also contact the Dean's Office of the College of Natural Sciences and Mathematics for instructions on applying for graduation.

(1) The student, under consultation with her/his advisor, should select free electives courses that are appropriate for the student's targeted post-graduate PA programs.

Bachelor of Science—Natural Science/Pre-podiatry 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

Writing Intensive: A second writing-intensive course is not required for three-year students who transfer to a professional school with an articulation agreement.

Liberal Studies Elective: 3cr, COSC 101, no courses with SCI prefix

Major:	43
Required Courses:	
BIOL 150 Human Anatomy	4cr
BIOL 201 Principles of Ecology and Evolution	4cr
BIOL 202 Principles of Cell and Molecular Biology	4cr
BIOL 203 Principles of Genetics and Development	4cr
BIOL 240 Human Physiology	4cr
BIOL 241 Introductory Medical Microbiology	4cr
CHEM 231 Organic Chemistry I	4cr
CHEM 232 Organic Chemistry II <i>or</i>	
<i>or</i> 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) 23-29
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
Maximum cr for work at affiliated podiatry school 30cr

Total Degree Requirements: 120

(* Accelerated three-year Temple University School of Podiatry program. A maximum of 30cr may be transferred after the first year 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.

(1) Student is to work with his/her advisor to select appropriate free electives for professional school. Additional courses in biology are recommended.

Department of Physics

Website: www.iup.edu/physics

Muhammad Z. Numan, Chairperson; Bradshaw, Haija, Karimi, Kenning, Sobolewski, Talwar, Zhou; and professors emeriti Buckwalter, Fox, Freeman, Gaggini, Hershman, Matolyak, Matous, Riban, Roberts

The goal of the Department of Physics is to prepare students for productive careers in physics. Two degree programs are offered: bachelor of science degree program in physics and bachelor of science in education degree program in physics education. The BS—Physics offers preparation for graduate study in physics or for research in industrial technology. There are three tracks in the BS—Physics program: Nanomanufacturing Technology, Pre-engineering, and Applied Physics.

Bachelor of Science

Students in the **BS—Physics/Nanomanufacturing Technology Track (NMT)** 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. 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. Graduates of the BS—Physics/NMT may enter careers in industry and education.

The **BS—Physics/Pre-engineering Track** is designed to prepare students for admission to engineering school. The student transfers to the affiliated engineering school after appropriate IUP course work has been completed. When sufficient credit from the affiliated engineering school has been earned, the student transfers the credit back to IUP to earn the bachelor of science degree.

The **BS—Physics/Applied Physics Track** is a practical degree in which the graduates will be trained to work in the semiconductor or electronics industry.

Bachelor of Science in Education

The **BSE—Physics Education** combines the content knowledge of physics with the pedagogical training offered by the College of Education and Communications to prepare graduates to teach physics as well as science in the secondary school.

Minor in Physics

To minor in physics, a student must successfully complete 18-20 credits in physics consisting of at least 6 credits at the 300 level or higher.

Nanofabrication Cooperative Experience

The IUP physics department participates in a cooperative agreement with Penn State University (PSU) to help address the need of Pennsylvania industry for skilled nanofabrication workers. Anyone who meets the prerequisite requirements may enroll through IUP in a one-semester experience at the PSU Center for Nanotechnology Education and Utilization (CNEU). These courses are offered in two modes: (1) as a capstone semester experience at the Penn State CNEU or (2) as a hybrid capstone semester consisting of distance learning followed by a two-week hands-on lab experience at CNEU. For more information, contact the physics department.

Bachelor of Science—Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126, no courses with PHYS prefix

Major: 34

Required Courses:

PHYS 131 Physics I-C Lecture (1)	*cr
PHYS 132 Physics II-C Lecture (1)	*cr
PHYS 141 Physics I-C Lab (1)	*cr
PHYS 142 Physics II-C Lab (1)	*cr
PHYS 331 Modern Physics	3cr
PHYS 345 Optics	3cr
PHYS 441 Classical Mechanics	3cr
PHYS 451 Electricity and Magnetism	3cr

Additional Required Courses:

PHYS 231 Electronics	4cr
PHYS 342 Thermal and Statistical Physics	3cr
PHYS 350 Intermediate Experimental Physics I	3cr
PHYS 401 Theoretical Physics	3cr
PHYS 461 Quantum Mechanics I	3cr
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 341 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) 0-6cr

Free Electives: 20-26

Total Degree Requirements: 120

- (1) Credits are counted in the Liberal Studies natural science requirement.
- (2) Six credits of computer programming will substitute for the foreign language requirement: COSC 110, 210, or higher-level computer science courses (COSC 250 recommended), with department permission.

Bachelor of Science—Physics/Pre-engineering Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126, no courses with PHYS prefix

Major: 34

Required Courses:

PHYS 131 Physics I-C Lecture (1) *cr

PHYS 132 Physics II-C Lecture (1) *cr

PHYS 141 Physics I-C Lab (1) *cr

PHYS 142 Physics II-C Lab (1) *cr

PHYS 331 Modern Physics 3cr

PHYS 345 Optics 3cr

PHYS 441 Classical Mechanics 3cr

PHYS 451 Electricity and Magnetism 3cr

Additional Required Physics Courses: (2)

PHYS 231 Electronics 4cr

PHYS 342 Thermal and Statistical Physics 3cr

PHYS 350 Intermediate Experimental Physics I 3cr

PHYS 355 Computer Interfacing 3cr

PHYS 401 Theoretical Physics 3cr

PHYS 461 Quantum Mechanics I 3cr

PHYS 472 Nuclear Physics *or* 3cr

or 490 Solid State Physics 3cr

Controlled Electives: As required per engineering program 6-8

Chemical Engineering:

CHEM 231 Organic Chemistry I 4cr

CHEM 232 Organic Chemistry II 4cr

Civil Engineering:

MATH 216 Probability and Statistics for Natural Sciences 3cr

— Technical elective 3-4cr

Electrical Engineering:

MATH 216 Probability and Statistics for Natural Sciences 3cr

— Technical elective 3-4cr

Industrial Engineering:

MATH 216 Probability and Statistics for Natural Sciences 3cr

— Technical elective 3-4cr

Materials Science and Engineering:

CHEM 231 Organic Chemistry I 4cr

CHEM 232 Organic Chemistry II 4cr

Mechanical Engineering:

— Technical electives 6-8cr

Other Requirements: 24-30

CHEM 111 General Chemistry I 4cr

CHEM 112 General Chemistry II 4cr

COSC 110 Problem Solving and Structured Programming 3cr

COSC 250 Introduction to Numerical Methods 3cr

MATH 225 Calculus III 3cr

MATH 341 Differential Equations 3cr

MATH 342 Advanced Mathematics for Applications 4cr

Foreign Language Intermediate Level (3) 0-6cr

Free Electives: (If no automatic transfer into the University of Pittsburgh) 4-12

Special Requirements:

Two years at University of Pittsburgh School of Engineering (4)

Total Degree Requirements: 120

- (1) Credits are counted in the Liberal Studies natural science requirement.
- (2) Some of these courses may be taken at the University of Pittsburgh.
- (3) Six credits of computer programming will substitute for the foreign language requirement: COSC 110, 210, or higher-level computer science courses (COSC 250 recommended), with department permission.
- (4) A 3.0 cumulative GPA is required for transfer to the University of Pittsburgh. Students transferring to University of Pittsburgh do not need

a second writing-intensive class. Students need at most 64 additional credits from the University of Pittsburgh to receive the engineering degree.

- (#) See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation. Students earn two degrees, hence the high credit count.

Bachelor of Science—Physics/Nanomanufacturing Technology Track

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126, no courses with PHYS prefix

Major: 46

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 331 Modern Physics 3cr

PHYS 345 Optics 3cr

PHYS 441 Classical Mechanics 3cr

PHYS 451 Electricity and Magnetism 3cr

Required PSU Capstone Courses:

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

Additional Required Courses:

PHYS 231 Electronics 4cr

PHYS 350 Intermediate Experimental Physics I 3cr

PHYS 355 Computer Interfacing 3cr

PHYS 475 Physics of Semiconductor Devices I 3cr

PHYS 476 Physics of Semiconductor Devices II 3cr

Other Requirements: 17-23

CHEM 111 General Chemistry I 4cr

CHEM 112 General Chemistry II 4cr

COSC 110 Problem Solving and Structured Programming 3cr

COSC 250 Introduction to Numerical Methods 3cr

Foreign Language Intermediate Level (2) 0-6cr

Free Electives: 7-13

Total Degree Requirements: 120

- (1) Credits are counted in the Liberal Studies natural science requirement.
- (2) Six credits of computer programming will substitute for the foreign language requirement: COSC 110, 210, or higher-level computer science courses (COSC 250 recommended), with department permission.

Bachelor of Science—Physics/Applied Physics

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 44

Mathematics: MATH 125

Natural Science: PHYS 131-141 and 132-142

Liberal Studies Elective: 3cr, MATH 126, no courses with PHYS prefix

Major: 28

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 331	Modern Physics	3cr
PHYS 345	Optics	3cr
PHYS 441	Classical Mechanics	3cr
PHYS 451	Electricity and Magnetism	3cr

Additional Required Courses:

PHYS 231	Electronics	4cr
PHYS 342	Thermal and Statistical Physics	3cr
PHYS 350	Intermediate Experimental Physics I	3cr
PHYS 475	Physics of Semiconductor Devices I	3cr

Controlled Electives: Select one of the following subfields: 19-21
Solid State Electronics: COSC 300, MATH 342, 21cr
 PHYS 323, 342, 353, 432, 475
Computer Science: COSC 300, 410, 450, MATH 171, 21cr
 PHYS 342, 353, 432
Chemistry: CHEM 231, 323, 341, 342, 343, MATH 225 19cr
Biology: BIOL 111, 112, CHEM 231, 351; one course from 19cr
 BIOL 250, 263, 401
Geoscience: GEOS 201, 202, 203, 341, 342, 371 21cr

Other Requirements: 17-23

CHEM 111	General Chemistry I	4cr
CHEM 112	General Chemistry II	4cr
COSC 110	Problem Solving and Structured Programming	3cr
COSC 250	Introduction to Numerical Methods	3cr
MATH 341	Differential Equations	3cr
Foreign Language	Intermediate Level (2)	0-6cr

Free Electives: 4-12

Total Degree Requirements: 120

- (1) Credits are counted in the Liberal Studies natural science requirement.
- (2) Six credits of computer programming will substitute for the foreign language requirement: COSC 110, 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: 47

Mathematics: MATH 125

Natural Science: CHEM 111-112 or CHEM 113-114

Social Science: PSYC 101

Liberal Studies Electives: 6cr, MATH 341, GEOS 101 or 103 or 105, no courses with PHYS prefix

College: 31

Preprofessional Education Sequence:

ACE 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 345	Optics <i>or</i>	
<i>or</i> 342	Thermal and Statistical Physics	3cr
PHYS 350	Intermediate Experimental Physics I	3cr
PHYS 441	Classical Mechanics	3cr
PHYS 451	Electricity and Magnetism	3cr

Controlled Elective:

Physics electives—two major courses 200 level or higher 6cr

Other Requirements: 10

BIOL 201 <i>or</i>	Principles of Ecology and Evolution <i>or</i>	
<i>or</i> 202	Principles of Cell and Molecular Biology	4cr
MATH 126	Calculus II for Physics, Chemistry, and Mathematics	3cr
MATH 225	Calculus III for Physics, Chemistry, and Mathematics	3cr

(#) **Total Degree Requirements:** 121

(*) See requirements leading to teacher certification, titled “3-Step Process for Teacher Education,” in the College of Education and Communications section of this catalog.

(#) See advisory paragraph “Timely Completion of Degree Requirements” in the section on Requirements for Graduation.

Minor—Physics

18-20

Required Courses: 8

PHYS 131 <i>or</i> 111	Physics I-C Lecture <i>or</i> Physics I Lecture	3cr
PHYS 141 <i>or</i> 121	Physics I-C Lab <i>or</i> Physics I Lab	1cr
PHYS 132 <i>or</i> 112	Physics II-C Lecture <i>or</i> Physics II Lecture	3cr
PHYS 142 <i>or</i> 122	Physics II-C Lab <i>or</i> Physics II Lab	1cr

Additional Elective Courses: 12

At least 10 credits from the following, 6cr of which must be at 300 level or higher: (1)
 PHYS 231, 331, 342, 355

(1) Other courses may be considered with department recommendation.

Department of Psychology

Website: www.iup.edu/psychology

Pearl S. Berman, Chairperson; Davis, Farrell, Goodwin, Hatfield, Johnson, Kaniasty, Knight, LaPorte, Long, Luo, McHugh, Meil, Mills, Newell, Palumbo, Pavloski, A. Perillo, J. Perillo, Raeff, Reardon, Roehrich, Ruffner, Sadler, Sherburne; and professors emeriti Grover, Husenits, Magee, Marquette, Patton, Rich, Rittle, Robertson, Schneider, Thornton, Walz, Zanich

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 findings 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, medicine, advertising, law, and theology. The department also offers psychology minors.

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.

Bachelor of Arts—Psychology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: MATH 217

Social Science: PSYC 101

Liberal Studies Elective: 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 (2) 3-4cr

B. *Individual Differences:* PSYC 320, 321, 325 3-4cr

C. *Social/Environmental:* PSYC 330, 331, 335 (3) 3-4cr

D. *Cognition/Learning:* PSYC 341, 342, 345 (4) 3-4cr

E. *Biological Bases of Behavior:* PSYC 350, 352, 355, 356, 359 (5) 3-4cr

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 (6) 0-6cr

Minor/concentration 15cr

Free Electives: 16-28

Total Degree Requirements: 120

- (1) At least two must be content-based laboratory courses.
 - (2) Credit toward the major is given for only one of PSYC 310, 311, or 315.
 - (3) Credit toward the major is given for only one of PSYC 330 or 335.
 - (4) Credit toward the major is given for only one of PSYC 342 or 345.
 - (5) Credit toward the major is given for only one of PSYC 350 or 356 and for only one of PSYC 359 or 360.
 - (6) Intermediate-level foreign language may be included in Liberal Studies electives.
-

Bachelor of Arts—Psychology/Honors Program in Psychology

Liberal Studies: As outlined in Liberal Studies section with the following specifications: 43-44

Mathematics: MATH 217

Social Science: PSYC 101

Liberal Studies Elective: 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 (1) 6cr

PSYC 483 Honors Thesis (2) 6cr

Controlled Electives: A minimum of one course from each of the following six core areas: (3)

A. *Developmental Psychology:* PSYC 310, 311, 312, 315 (4) 3-4cr

B. *Individual Differences:* PSYC 320, 321, 325 3-4cr

C. *Social/Environmental:* PSYC 330, 331, 335 (5) 3-4cr

D. *Cognition/Learning:* PSYC 341, 342, 345 (6) 3-4cr

E. *Biological Bases of Behavior:* PSYC 350, 352, 355, 356, 359 (7) 3-4cr

F. *Metatheoretical Perspectives in Psychology:* PSYC 410, 411 3cr

Other Requirements: 15-21

Foreign Language Intermediate Level (8) 0-6cr

Minor/Concentration 15cr

Free Electives: 12-22

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 is given for only one of PSYC 310, 311, or 315.
 - (5) Credit toward the major is given for only one of PSYC 330 or 335.
 - (6) Credit toward the major is given for only one of PSYC 342 or 345.
 - (7) Credit toward the major is given for only one of PSYC 350 or 356 and for only one of PSYC 359 or 360.
 - (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

or 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 is given for only one of PSYC 310, 311, or 315.
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Minor—Psychological Science 18-19

Required Courses: (1)

PSYC 101 General Psychology (2) 3cr

PSYC 290 Research Design and Analysis I (3) 4cr

Two 4cr PSYC laboratory courses 8cr

One PSYC elective 3-4cr

- (1) At least 6cr must be 300 level or higher.
 - (2) Meets Liberal Studies requirement.
 - (3) Prerequisite: MATH 217.
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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-0l-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-0l-3cr

Prerequisite: Sophomore status (except for accounting 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 will 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-0l-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 303 Financial System Analysis 3c-0l-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 to demonstrate financial accounting system design. Basic accounting standards, concepts, and current issues underlying financial reporting are reviewed.

ACCT 304 Intermediate Accounting I 3c-0l-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-0l-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-0l-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-0l-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 that relates to their academic training and career objectives in accounting.

ACCT 401 Advanced Accounting 3c-0l-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-0l-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-0l-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-0l-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-0l-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-0l-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-0l-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-0l-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 475 Accounting for the Oil and Gas Industry 3c-01-3cr

Prerequisites: ACCT 201 and 202, or equivalent

An introduction to the accounting theory, practices, and reporting requirements for the oil and gas industry. The significance of the industry in a global economy and the impact on International Financial Reporting Standards are addressed.

ACCT 482 Independent Study var-1-3cr

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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 493 Internship in Accounting var-3-6cr

Prerequisites: Approval of the Eberly College of Business and Information Technology internship coordinator, department chairperson, and dean. Must have completed a minimum of 90cr (18cr in ACCT) with a cumulative GPA of 2.75 and 3.00 GPA within the major.

A supervised learning experience that integrates the student's academic background with practical experience related to the students' major area of interest. The number of credits earned depends on the nature of the job and the amount of time involved in the internship.

ACE: Adult and Community Education
Department of Adult and Community Education
College of Education and Communications

ACE 103 Digital Instructional Technology 3c-01-3cr

Prerequisite: Education major

Introduces freshman preservice 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 toward credits needed for communications media major. (Offered as COMM 103 before 2017-18.)

ADVT: Advising and Testing
Department for Disability Access and Advising
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) Cross-listed as DVST 170. These courses may be substituted for each other and be used interchangeably for D/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 discipline of anthropology: the study of human beings through time and across cultures. This class is organized around select themes that allow students to explore the nature and relevance of anthropological methods, theories, and perspectives. These themes may include, but are not limited to, human origins, evolution and human behavior, gender roles, the links between environment and culture, and social stratification. A strong emphasis on the effects of globalization on human cultures, and the

potential for anthropology research to address contemporary issues such as cultural and environmental sustainability, public health, and social equity.

ANTH 211 Cultural Anthropology 3c-01-3cr

Introduces the major concepts, theories, and research methods of cultural anthropology that are used to study and understand human culture in different parts of the world. An emphasis given to how traditional and nontraditional cultures undergo change as a result of globalization, and how cultural anthropologists study the social, economic, and political consequences that result from integration into an expanding and changing global economy. Topics covered may include, but are not limited to, social organization, economics, power and politics, race and ethnicity, language and communication, technology, religion and ritual, and sex and gender. A wide geographic coverage provides a basis for global comparisons of cultural similarities and differences among human societies.

ANTH 213 World Archaeology 3c-01-3cr

Archaeology is the study of past cultures and societies through their material remains. Explores the archaeologies of Western and non-Western societies and examines theory, methods, and techniques for investigating, reconstructing, interpreting, preserving, and learning from the past. Examines human cultural chronology from the appearance of human ancestors to the present through an examination of important social, economic, and ideological questions, as well as artifact remains. Includes the origins of food production, social inequality, and civilization.

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 240 Introduction to Global Health 3c-01-3cr

Explores the interdisciplinary study of global health and its relevance in our age of globalization as local medical systems are transformed by international integration. Defines the scope of global health and explores the methods of the subfield by utilizing ethnographic, theoretical, anthropological, and sociological readings to critically analyze the various factors that have contributed to the development of this global system. Investigates the relationship between culture and disease, different reproductive health practices, medical ethics, environmental factors in health, and social health disparities. Extends critical analysis to existing health systems across the globe and seeks ways for a positive role in supporting healthy individuals and communities.

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 250 Human Origins 3c-01-3cr

Offers a detailed and critical review of what has been learned to date about the origin and evolution of human morphology and behavior. Introduces students to the many human-like species ("hominins") that preceded the emergence of our own species (*Homo sapiens*), and examines the range of methods used by scientists to study human evolution. It also addresses a number of relevant and controversial issues, such as what it means to be "human," the extent and nature of present-day human variation, and whether *Homo sapiens* are still evolving.

ANTH 271 Cultural Area Studies: Africa 3c-01-3cr

Critically evaluates media headlines about African issues and reaches beyond these headlines to appreciate the complexity and diversity of people's lives in sub-Saharan Africa and the diaspora. Course readings, assignments, and ethnographic films explore the nature of anthropology research in Africa, the impact of colonialism on social and political life, and the contemporary struggles of people to define their place in local, national, and

global communities. Readings include ethnographic, historical, and popular accounts, as well as selections by African writers on issues of contemporary society, such as wildlife conservation, resource extraction, post-conflict development, food aid, and refugee relief and resettlement.

ANTH 272 Culture Area: China **3c-01-3cr**

A broad introduction to Chinese culture and society from an anthropological perspective. Following an overview of China's geography and history, the course covers a range of topics pertaining to Chinese traditional culture, including marriage, family, education, governance, gender, religion, language, health, art, and music. Relies on cross-cultural comparisons to help locate Chinese culture and customs within a broader worldwide context. Also encourages students to consider the transformation (rather than elimination) of traditional cultural elements as globalization has come to play an increasingly important role in China's social and economic development.

ANTH 273 Cultural Area Studies: Southeast Asia **3c-01-3cr**

Introduces the peoples and cultures of mainland and island Southeast Asia. Traces prehistory and the development of indigenous states in the area and impact of world religions, trade, and Western colonialism. Themes include the state, violence, marginality, and gender. Issues include ethnic minority tribal peoples, tropical deforestation, gender, effects of genocide, art and tourism, and migration.

ANTH 274 Cultural Area Studies: Latin America **3c-01-3cr**

An overview of the diverse societies of Latin America from the perspectives of anthropology and Latin American studies. Through a historical, cross-cultural, and comparative approach, it explores the cultural, economic, political, and social life in many societies of this large and diverse region and transnational nature of many of these societies as a result of globalization. Themes covered are: race, ethnicity, and gender as they appear in Latin America, political and economic processes, rural underdevelopment and urbanization, transnational movement and cultures, religion, and indigenous social movements.

ANTH 310 Voyages of Discovery **3c-01-3cr**

Focuses on human diasporas through key explorations and explorers, spanning the period from 40,000 years ago to the late 19th century and touching on every inhabited continent. Through these voyages of discovery, it addresses the diffusion of ideas, the migration of peoples, technological development and its role in culture change, and the historical and cultural circumstances involved in geographic expansion. Cultures from across the globe and throughout time are discussed in terms of their expansion and their responses to the expansion of other cultures. Discusses the historical roots of globalism and its archaeologically visible results.

ANTH 314 Contemporary Native American Cultures **3c-01-3cr**

Introduces Native American cultures of North America north of Mexico from an anthropological perspective with an emphasis on historical and contemporary cultural diversity. Emphasizes the history of culture change and continuity as well as current political, economic, and cultural issues among the Native nations of the United States and Canada.

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 also 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 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 333 The Archaeology of Early China **3c-01-3cr**

An overview of the history, practice, and achievements of archaeology in China, with a focus on early China (up to the Han dynasty). A portion of the course is devoted to those discoveries that have shed light on important developments in China, including its early stone age occupation, the growth of agriculture, the emergence of civilization, as well as the construction of impressive structures (such as the Great Wall and the first emperor's terracotta army). Also discusses the ways in which Chinese and Western archaeology differ, as well as the role which nationalism and regionalism have played in archaeological research and interpretation in China.

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 Gender **3c-01-3cr**

Explores the primary category of social difference into which humans are universally socialized, which is the gendered nature of women's and men's experiences in the world from an anthropological perspective. An introduction to cross-cultural experiences of gender, and the social constructions of gender. Readings focus on the intersection of race, class, sexuality, and gender, and the impact on gender of technology, colonization, globalization, and the nation-state. Considers the experiences of men and women around the world from various frameworks, including reproductive, social, economic, post-colonial, and post-structural.

ANTH 352 The Anthropology of Human Rights **3c-01-3cr**

Engages the concept of human rights as applied to situations in the contemporary world. Takes an interdisciplinary approach, with an emphasis on anthropology to examine the following principal questions: (1) What are the historical origins of contemporary ideas about human rights? (2) What are some of the foremost human rights situations in the world today? (3) What are the political, economic, and cultural contexts in which human rights abuses occur? (4) What is the role of the committed (i.e., activist) anthropologist? Focuses on the interplay between the abuse of human rights, power, and culturally constructed difference, such as ethnicity and gender. Extends contemporary interpretations to existing social and political problems around the world to seek ways in which anthropologists can have a positive role to play in finding solutions to those problems.

- 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 that 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 includes a historical perspective on Native North American life-ways. 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 students to 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 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 emphasis 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 Environmental Anthropology** **3c-01-3cr**
Prerequisite: ANTH 110 or 211
Introduces environmental anthropology, the study of the relationship between the natural environment and human social and cultural life. Illustrates the importance of understanding human-environment interactions in studying contemporary issues in global development, and in investigating the past. Explores major analytical and methodological approaches in environmental anthropology, including ecological anthropology, ethnoecology, political ecology, and environmental justice. (Titled Cultural Geography before 2016-17.)
- ANTH 425 Archaeological Theory and Research Design** **3c-01-3cr**
Prerequisites: ANTH 244, 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**
Focuses on the influences of biology, culture, political economy, and history on what and how peoples of the world eat. Readings, lectures, films, and projects link the dietary implications of foraging, crop domestication, state formation, and industrial capitalism to food choices and health. Examines various sociocultural practices relating to the uses of food in marking social difference, maintaining social relationships, and dealing with cultural constructions of health, illness, and the body. Considers the influence of the agricultural revolution, colonization, and globalization on the transformation of food meanings, practices, and availability.
- ANTH 444 Medical Anthropology** **3c-01-3cr**
Prerequisites: ANTH 110, 211, SOC 151 or 161 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 science students.
- ANTH 450 Health Disparities** **3c-01-3cr**
Prerequisite: SOC 151 or ANTH 211 or with instructor permission
Explores health status and healthcare disparities across groups based on race/ethnicity, gender, socioeconomic status/social class, nativity, refugee and citizen status, and other cultural and demographic characteristics. Uses a social determinants of health perspective to consider how social, cultural, environmental, political, and economic conditions produce unequal and inequitable health outcomes, with special focus on disadvantaged populations. Addresses agency and empowerment of populations seeking and accessing health and health care. Includes different levels of public health interventions that can improve health outcomes, better calibrate access to health care, and improve health equity within populations. (Also offered as SOC 450; may not be taken for duplicate credit.)
- 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 481 Special Topics** **var-1-6cr**
Special topics courses are offered on an experimental or temporary basis to explore topics that are 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.
- ANTH 482 Independent Study** **var-1-3cr**
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost
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 Office of the Provost
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**
An opportunity to learn specialized techniques and approaches presently in use in archaeology. In any one semester, the course concentrates on one of a range of possible themes, including lab methods, field methods, statisti-

cal 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. May be repeated for credit under a different methods title.

ANTH 486 Historic Artifacts **3c-0l-3cr**

Focuses on techniques for collecting, analyzing, and interpreting data from historic period (1500 to present) artifacts commonly found on North American archaeological sites. Analytic techniques, including classification, quantification of attributes, relating artifact patterns to human activities, and statistical interpretation are taught in a hands-on environment. Outlines the history of technology as a means to identify the age and use of artifacts. Considers that all objects occurred as a thought before they were made material and how to work backwards from the material to the thought.

ANTH 487 Geoarchaeology **3c-0l-3cr**

Prerequisite: ANTH 244 or GEOS 201, or instructor permission
Surveys geological methods and techniques used to investigate archaeological research questions. Includes sedimentary and geomorphic processes affecting the formation and preservation of archaeological sites; methods of paleoenvironment and paleoclimate reconstruction, and radiometric dating techniques. Illustrates the importance for archaeologists to understand the geological processes that affect archaeological sites—before, during, and after people have been there. Understanding these processes is crucial to accurately reconstructing the dynamics of human behavior.

ANTH 488 Geophysical Applications in Archaeology **3c-0l-3cr**

Provides the methodological and technological knowledge to apply various geophysical systems used in archaeological investigations. These systems may include, but are not limited to, Ground-Penetrating Radar, Magnetometry, Electrical Resistivity, Conductivity, and Susceptibility.

ANTH 489 Prehistoric Technologies of Eastern North America **3c-0l-3cr**

Introduces the prehistoric technologies of Eastern North America. Focuses on the material culture commonly recovered from pre-European Contact Native American archaeological sites, including stone, ceramic, bone, and native metal artifacts. Includes analytical techniques of classification, quantification, and interpretation linking artifacts to human behavior.

ANTH 490 Applied Spatial Methods in Archaeology **3c-0l-3cr**

Prerequisite: ANTH 244 or instructor permission
Introduces methods used within archaeology to examine the spatial relationships between archaeological artifacts, features, and sites at various scales. Explores the strengths and weaknesses of various spatial methods in archaeology. Provides students with the ability to become knowledgeable consumers of these methods in future research and working environments.

ANTH 491 Zooarchaeology **3c-0l-3cr**

Introduces the archaeological specialty of zooarchaeology, which is the study of human-animal interactions through the analysis of archaeological remains from archaeological sites. Explores the basics of vertebrate osteology through lectures and hands-on exercises, as well as the nature of various types of zooarchaeological interpretation such as studies of hunting and butchering practices, dietary importance, seasonality, domestication, paleopathology, and past environment.

ANTH 492 Soil Science: Archaeological and Geoenvironmental Applications **3c-0l-3cr**

Introduces the ways in which archaeologists and geoscientists define, recognize, examine, and interpret soils in both the field and the laboratory. Examines (1) how the interactions of landform, topography, climate, and biota result in patterns of soil development and the distribution of soils that we observe within the landscape; (2) the significance of soils to other disciplines, including archaeology, quaternary geology, and geoenvironmental science; and (3) how the physical, chemical, and biological properties of soils are influenced by human activities, both past and present. Includes

field trips that may occur on weekends. (as GEOS 492; may not be taken for duplicate credit.)

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) **var-2 or 4cr**
Instrument/Voice I-VIII

Prerequisites 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, vocal, or composition instruction for music majors in their primary area of concentration for up to eight semesters (four in composition). Includes technical studies, musical repertoire, and performance experiences at the professional level. Weekly half-hour lessons are given (2cr) for students enrolled in the BS and BA degree programs. Weekly one-hour lessons (4cr) are given for students enrolled in the BFA degree program only.

APMU Applied Music (minor area) **var-1cr**
Instrument/Voice I-VIII

Prerequisites 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 | Harpichord I-VIII |
| APMU 104, 154, 204, 254, 304, 354, 404, 454 | Harp I-IV |
| 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 125, 225, 325, 425 | Composition I-IV |

APMU 126 Piano Proficiency Level I **0c-0l-0cr**
Corequisite: MUSC 154 or APMU 151

Adjudicates the performance of students in piano (on a pass/fail basis) as partial fulfillment of the requirements for the BA, BFA, and BSEd music degree programs. In order to pass the Level I jury, students are expected to attain a basic level of piano proficiency. (Offered as APMU 124 before 2016-17.)

APMU 127 Piano Proficiency Level II **0c-0l-0cr****Corequisite:** APMU 251

Adjudicates the performance of students in piano (on a pass/fail basis) as partial fulfillment of the requirements for the BSEd—Music program. In order to pass the Level II jury, students are expected to attain an intermediate level of piano proficiency. (Offered as APMU 123 before 2016-17.)

APMU 227 Capstone Jury: Secondary Instrument **0c-0l-0cr****Prerequisite:** Must be taken during the fourth semester of APMU Applied Music (secondary instrument)

Adjudicates the performance of students in a secondary performance area (on a pass/fail basis). To pass the secondary jury, students are expected to perform at a functional level. All students who undertake four semesters of secondary applied study must complete a capstone jury, but those in the BSEd—Music program with a voice concentration take APMU 127 in lieu of 227.

APMU 427 Capstone Jury: Primary Instrument **0c-0l-0cr****Prerequisite:** Must be taken during the final semester of APMU Applied Music (primary instrument) required by program

Adjudicates the performance of students in their respective primary performance area (on a pass/fail basis) as partial fulfillment of the requirements for the BA, BFA, and BSEd music degree programs. To pass the primary jury, students are expected to perform at a professional level. (Offered as APMU 122 before 2016-17.)

APMU 480 Wind and Percussion Pedagogy **2c-0l-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.

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-0l-3cr**

An overview of art education within K-12 programs. Requirements and responsibilities of art teachers are explored in the context of becoming a professional educator. Curriculum and assessment issues pertaining to state standards are examined. Various populations of students, as well as various teaching contexts, are featured in lectures, readings, and discussions. Art teaching is viewed as a dynamic discipline as contemporary issues within art, art education, and general education are studied. Also provides information regarding the teaching of art with special needs populations.

ARED 317 Art in K-6 Programs **3c-0l-3cr****Prerequisite:** Admission to Step 1 of the 3-Step Process

Examines children's artistic development in relation to teaching art in K-6 settings. Explores types of art programs, planning, motivation, content, and evaluation of art lessons for all students in elementary art classes, including those with special needs. Students apply theories and knowledge to the design of instructional curricula, units, and lessons, as well as practice and critique the delivery of instruction.

ARED 318 Art in 7-12 Programs **3c-0l-3cr****Prerequisite:** Admission to Step 1 of the 3-Step Process

Explores a number of practical and theoretical approaches related to the teaching of studio art in 7-12 public school settings. Of primary interest is the potential for application of college-level art theories and techniques, along with exploring a variety of research writing techniques. Also provides information regarding the teaching of art with special needs populations.

ARED 320 Art Criticism and Aesthetics in K-12**Programs****3c-0l-3cr**

Prerequisites: ARED 315 (minimum C grade) and art education 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 K-12.

ARED 321 Art History Inquiry for K-12 Art Programs **3c-0l-3cr**

Prerequisites: ARED 315 (minimum C grade) and art education major. Explores methods, media, and activities that integrate art history content into the school art curriculum. Students plan and execute lessons that are appropriate at various grade levels and that 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-0l-3cr**

Prerequisites: ARED 315 (minimum C grade) and art education 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 482 Independent Study **var-1-3cr**

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost. 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 20th Century **3c-0l-3cr****Prerequisite:** Art majors and minors only

A study of art in the US 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-0l-3cr**

Introduces the elements of visual expression, past and present. Students gain an understanding of the processes of art making and the motivations and goals of artists across time. Students learn how various factors, including religion, politics, and literature, affect the creation of the arts of any given period or region.

ARHI 205 Ancient to Medieval Art **3c-0l-3cr**

Examines a selection of art and architectural forms from the Prehistoric period through the late Middle Ages, in relation to the political, social, economic, and religious forces that have shaped Western cultures.

ARHI 207 Renaissance through Modern Art **3c-0l-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 224 Introduction to Asian Art **3c-0l-3cr**

Examines a selection of art and architectural forms from China, Japan, and India, ancient and modern. 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 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 19th-Century European Painting 3c-01-3cr

Prerequisite: Junior standing or instructor permission

Surveys the history of Western painting from the late 18th century to the turn of the 20th. 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 20th-Century European Art 3c-01-3cr

Studies 20th-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 affected 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 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 20th century. Issues of religion, patronage, and popular culture are included.

ARHI 427 Japanese Narrative Art 3c-01-3cr

Introduces the Japanese tradition of presenting narratives pictorially. Works considered include historical and fictional stories imaged in screens and scrolls, as well as modern and contemporary films which continue this visual idiom.

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 Office of the Provost
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 art history 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	3c-3l-3cr	ART 400 Professional Practices	3c-0l-3cr
Introduces the processes, techniques, and aesthetics of the ceramics medium with an examination of historical and contemporary approaches. Emphasis is placed on basic hand building methods and techniques.		Prerequisites: BFA or BA studio majors only, senior status Professional practices for the visual artist. Major issues may include the development of a thesis exhibition, résumé development, an artist's professional image, portfolio development, marketing skills, career opportunities, and grant writing.	
ART 215 Sculpture	0c-6l-3cr	ART 421 Advanced Drawing	0c-6l-3cr
An introduction to sculpture with an emphasis on study of form as well as visualizing in the third dimension.		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 216 Jewelry and Metals	0c-6l-3cr	ART 425 Critical Practice	3c-0l-3cr
Prerequisite: ART 113 or instructor permission An introduction to jewelry and metals with an emphasis on the design and creation of functional and nonfunctional art objects. Basic processes of metal fabrication is the focus.		Prerequisites: Junior, senior, or graduate status; art majors only Assists advanced students to acquire art criticism concepts and skills. Through written discourse, students engage in both the discourse of art making and contemporary theories.	
ART 217 Print Media	0c-6l-3cr	ART 448 Brand Design	1.5c-2l-3cr
An introduction to basic techniques of print media including planographic, relief, and electronic processes.		Prerequisite: ART 214 An integrated study of branding concepts in marketing and art including aesthetics in commercial art, design of brand and corporate identity trademarks, theories of brand marketing and business strategy, customer touchpoints in brand communication, and branding as a corporate strategy. (Also offered as MKTG 448; may not be taken for duplicate credit.)	
ART 218 Introduction to Graphic Design	0c-6l-3cr	ART 451 Advanced Woodworking: Function and Form	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.		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 281 Special Topics	var-1-3cr	ART 452 Advanced Ceramics	0c-6l-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.		Prerequisite: ART 214 Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.	
ART 313 Intermediate Ceramics: Wheel Throwing	3c-3l-3cr	ART 453 Advanced Sculpture	0c-6l-3cr
Prerequisite: ART 214 with a grade of "C" or better Focuses on structured problems in the ceramic medium designed to encourage the student to apply basic forming skills experienced at the introductory level with emphasis on wheel-thrown components and practice. Pottery shapes requiring singular and multiple-form components are investigated along with kiln design and firing, as well as high-fire clay and glaze calculation as both theory and practical experience.		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 316 Intermediate Jewelry and Metals	0c-6l-3cr	ART 454 Advanced Painting	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, are explored.		Prerequisite: ART 211 Individual experimentation and exploration by the painter and investigation of the various technical approaches.	
ART 352 Intermediate Ceramics: Mold Making	3c-3l-3cr	ART 455 Advanced Graphic Design I	var-3-6cr
Prerequisite: ART 214 with a grade of "C" or better Focuses on structured problems in the ceramic medium designed to challenge the student to apply basic forming skills experienced at the introductory level with emphasis on mold making and hand-building techniques and practice as applied to sculptural forms with emphasis on content and analysis. Personal and creative interpretation of assignments with continued exploration of kiln firing, as well as low-fire clay and glaze formulation.		Prerequisites: ART 218, 355; instructor permission required for 6cr studio Recommended Prerequisite: ART 356 Introduces three-dimensional modeling and rendering for illustration and animation. Studio experience focuses on current professional 3-D software.	
ART 355 Intermediate Graphic Design I	0c-6l-3cr	ART 456 Advanced Graphic Design II	var-3-6cr
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.		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 356 Intermediate Graphic Design II	0c-6l-3cr	ART 457 Advanced Print Media	var-3-6cr
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.		Prerequisites: ART 217, permission 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 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 Office of the Provost
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 that relate to the student's artistic and occupational goals.

ASIA: Asian Studies
College of Humanities and Social Sciences
ASIA 106 Samurai and Gongfu Heroes: Masculinity in East Asia 3c-0l-3cr

Explores what it means to be a man, from the haohan of China to the Men of High Purpose of Japan and beyond. Analyses stories, films, and official histories that have encouraged Chinese and Japanese people to emulate the great heroes of the past and how these people and their stories have been re-used in modern Asia. (Also offered as HIST 106; may not be taken for duplicate credit.)

ASIA 200 Introduction to Asian Studies 3c-0l-3cr

Introduces the study of Asian societies. Examines different regions of Asia and also different academic disciplines and how they create knowledge about Asia.

ASIA 483 Honors Thesis 3c-0l-3cr

Prerequisites: Asian Studies minor, 3.25 cumulative GPA; 3.5 GPA in Asian Studies 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 or project. Honors theses are completed individually under the direction of a professor who specializes in the student's area of interest and are approved by a thesis committee comprising the thesis director and two others. May be taken twice for a total of 6cr.

BCOM: Business Communication
Department of Management
Eberly College of Business and Information Technology
BCOM 221 Business Technical Writing 3c-0l-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 BCOM 321) (Offered as BTST 221 before 2014-15.)

BCOM 231 Speech Communication for Professionals 1c-0l-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. (Offered as BTST 231 before 2014-15.)

BCOM 321 Business and Interpersonal Communications 3c-0l-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. (Offered as BTST 321 before 2014-15.)

BCOM 342 Intercultural Business Communication 3c-0l-3cr

Prerequisite: Junior standing
An in-depth study and theoretical understanding of intercultural business communication, including international, national, ethnic, racial, and socioeconomic cultures. Explore practices, trends, and difficulties of people primarily identified with one culture attempting to interact with people of another culture through speaking, listening, writing, and nonverbal means. Problems of intercultural communication situations for business are pinpointed, elements of the problems clarified, and guidelines projected for problem mitigation. (Offered as BTST 342 before 2014-15.)

BIOC: Biochemistry
Biochemistry Program
College of Natural Sciences and Mathematics
BIOC 301 Foundations of Biochemistry 3c-0l-3cr

Prerequisites: BIOL 202 and a grade of "C" or better in CHEM 232
A foundation in biochemical principles emphasizing the structure/function relationships of proteins, carbohydrates, nucleic acids, and lipids. Catalysis by enzymes, including reaction mechanisms, kinetics, and regulation of activity are considered in detail. The structure of biological membranes and transport of both solutes and signals across membranes are explored. Assumes an understanding of eukaryotic cell structure and organic chemistry of major functional groups.

BIOC 302 Advanced Biochemistry 3c-0l-3cr

Prerequisite: Grade of "C" or better in BIOC 301
An examination of biochemical processes with a focus on metabolism. Central pathways are considered in detail, including regulatory mechanisms and hormonal signaling. Other selected processes and integration of mammalian metabolism are explored. Assumes an understanding of concepts relating to structure/function relationships for biomolecules, biological membranes, and signaling included in BIOC 301.

BIOC 311 Biochemistry Laboratory I 0c-4l-1cr

Prerequisites: BIOL 202, 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, 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-01-1cr
Prerequisite: BIOC 302, 312, 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 101 Basic Biology** 2c-21-3cr
 Deals with the principles of biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and man's interrelationship with his biological environment. The classification of plants and animals is reviewed briefly. Two hours lecture and two hours laboratory.
- BIOL 103 Life on Earth** 3c-21-4cr
Prerequisite: Non-Biology Department majors/minors only
 A basic introduction to the concepts of ecology, biological diversity, and evolutionary biology. Students learn fundamental ecological concepts about how living things interact with each other and the physical environment and apply these to understanding the origin of the tree of life and environmental problems facing populations, communities, and ecosystems. Students also learn about mechanisms and consequences of evolution. (Does not count toward BIOL electives, controlled electives, or ancillary sciences for Biology Department majors and minors.)
- BIOL 104 Human Biology: How the Human Body Works** 3c-21-4cr
Prerequisite: Non-Biology Department majors/minors only
 A basic introduction to the human body using disease as a mechanism for examining how the human body functions. Students explore the internal milieu of the body and how the different body systems affect this balance. Students gain an appreciation for the human body and its interactions with the environment. (Does not count toward BIOL electives, controlled electives, or ancillary sciences for Biology Department majors and minors.)
- BIOL 105 Cell Biology** 3c-01-3cr
Prerequisite: Enrollment restricted to students in the College of Health and Human Services
 Introduces concepts and applications for understanding human biological function from the point of view of cellular biology.
- BIOL 106 Human Genetics and Health** 3c-21-4cr
Prerequisite: Non-Biology Department majors/minors only
 A broad overview of the role that genetics and molecular biology play in the everyday life of humans. Organizes around a central question—how does genetics affect our health? Introduces human inherited diseases, genetic therapies utilized to correct genetic disorders, and the role of genetics in the new field of individualized medicine. Introduces the fields of stem cells and their therapeutic uses, the genetics of cancer, the microbial pathology of humans, and the utilization of vaccines in the treatment and prevention of human diseases. Using this background, the student is presented with the most recent events in the field of human genetic diseases and how they will affect the student in the future. (Does not count toward Biology electives, controlled electives, or ancillary sciences for biology majors and minors.)
- BIOL 107 Introduction to Forensic Biology** 3c-01-3cr
Prerequisite: Non-Biology Department majors and minors only
 A broad overview of basic principles underlying modern applications of biology in forensic science. Explores the science of forensic biology, traditionally known as serology, and the broad scope of laboratory tests used to investigate crimes involving DNA, blood, and other body fluids. Focuses on the issues related to DNA fingerprinting as they apply to public or legal proceedings in the law enforcement arena. (Does not count toward Biology electives, controlled electives, or ancillary sciences for biology majors and minors.)
- BIOL 115 Biotic Diversity of North America** 3c-01-3cr
Prerequisite: Non-Biology Department majors/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 117 Understanding HIV Biology and AIDS** 3c-01-3cr
Prerequisite: Non-Biology Department majors/minors only
 An introduction to the mode of infection and prevention of AIDS virus that are used as an illustration of biological principles. Profiles biological indicators for HIV disease and its progression to AIDS. Therapeutic and non-therapeutic approaches to treat HIV infections are emphasized. (Does not count toward Biology electives, controlled electives, or ancillary sciences for biology majors and minors.)
- BIOL 118 The History of Pain** 3c-01-3cr
Prerequisite: Non-Biology Department majors/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. (Does not count toward Biology electives, controlled electives, or ancillary sciences for biology majors and minors.)
- BIOL 119 Emerging Diseases** 3c-01-3cr
Prerequisite: Non-Biology Department majors/minors only
 Introduces infectious diseases and their biological basis as well as the social, historical, and ethical consequences of these types of afflictions. Covers background material such as the germ theory of disease, the cell theory, disease transmission, and the structure of scientific knowledge at a fundamental level. Emphasizes ecology, epidemiology, evolution, and control of infectious agents, as well as prevention and treatment of infectious disease. Includes specific cases of emerging or re-emerging diseases with an emphasis on current events related to disease outbreaks. (Does not count towards Biology electives, controlled electives, or Ancillary Sciences for biology majors and minors)
- BIOL 123 Perspectives in Cell and Molecular Biology** 1c-01-1cr
Prerequisite: BIOL 202
 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** 3c-31-4cr
Prerequisite: Non-Biology Department majors only
 A study of the functional and systematic anatomy of humans. Laboratory studies focus on models of human organs and systems along with a dissected human cadaver. Also includes mammals whose anatomy is then related to the human condition.
- BIOL 155 Human Physiology and Anatomy** 3c-31-4cr
Prerequisite: Non-Biology Department majors only (nutrition, dietetics, family and consumer sciences education, health and physical education, and safety, health, and environmental applied sciences 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 200 Medical Terminology** 2c-01-2cr
 Requires students to not only learn vocabulary, but also the proper pronunciation of medical terms. A class limit is requested to accommodate pedagogical approaches to developing oral pronunciation skills.

- BIOL 201 Principles of Ecology and Evolution** **3c-3I-4cr**
Prerequisite: For science majors only
 An introduction to ecology, including physiological and behavioral ecology, population and community ecology, and ecosystem and landscape ecology, and to evolution, including natural selection and population genetics, speciation, and phylogenetic history and systematics of life. Develops skills in the use of the scientific method. For science majors.
- BIOL 202 Principles of Cell and Molecular Biology** **3c-3I-4cr**
Prerequisite: CHEM 111 or 113
 An introduction to the structure and function of prokaryotic and eukaryotic cells and their cellular biochemistry, with emphasis on the genetic flow of information from DNA to RNA to protein and the regulatory events, including cell-cell communication, that instruct these pathways. Develops skills in the use of the scientific method. For science majors. (Offered as BIOL 111 before 2015-16.)
- BIOL 203 Principles of Genetics and Development** **3c-3I-4cr**
Prerequisite: BIOL 202 or 111 or instructor permission
 Introduces the science of genetics, with an emphasis on the basic principles of Mendelian genetics, the genetics of populations, molecular genetics, and the genetics of development. For science majors. (Offered as BIOL 263 before 2015-16.)
- BIOL 205 Ecological Methods** **2c-2I-3cr**
 Introduces the standard approaches for hypothesis testing in biological research, including experimental design, data collection, and data analysis. Emphasizes the analysis and interpretation of ecological data sets. Computer instruction focuses on software programs commonly used for biological data analysis.
- BIOL 210 Principles of Plant Biology** **2c-3I-3cr**
Prerequisites: BIOL 201, 202
 Explores the diversity, form, and function of vascular and nonvascular plants. Focuses on the evolutionary innovations that distinguish different taxonomic groups of plants. Topics include plant anatomy and physiology, growth and development, plant classification, plant ecology, and genetically modified foods. Discusses ways that plants are important to humans, ranging from food and lumber to sequestering carbon dioxide. An in-depth exploration of crop plants, including the science of biotechnology. (Titled Botany before 2014-15.)
- BIOL 211 Investigative Biological Forensics** **3c-0I-3cr**
Prerequisite: BIOL 107 or equivalent or instructor permission
 The lecture-only course examines how to collect and analyze biological evidences found on clothing, bones, insects, plants, weapons, and other surfaces to help identify victims and support criminal investigations. Covers a variety of subjects intimately linked including forensic anatomy, odontology, anthropology, pathology, entomology, botany, and environmental contamination. Presents case studies for each set of biological materials like insects, plants, bones, and fluids. Features in-depth discussion and writing.
- BIOL 220 General Zoology** **2c-3I-3cr**
Prerequisite: BIOL 201 or 112 or instructor permission
 Examines 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-3I-4cr**
Prerequisites: BIOL 112 or 201; CHEM 102, 112, or 114; or instructor permission
 Surveys 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 240 Human Physiology** **3c-2I-4cr**
Prerequisites: BIOL 150 and CHEM 101; or BIOL 203; or BIOL 263; or KHSS 221; or instructor permission
 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 on the underlying molecular and cellular processes, (2) that all organ systems use biological control systems to maintain organ homeostasis, and (3) that each organ function is closely controlled and dependent on the interaction/integration with functions from other organ systems. (Offered as BIOL 151 before 2015-16.)
- BIOL 241 Introductory Medical Microbiology** **3c-3I-4cr**
Prerequisites: Non-Biology Department majors in Health and Human Services and Natural Sciences and Mathematics only, BIOL 240; or instructor permission
 An introduction to medical microbiology that focuses on the structure, biology, and genetics of microbes in relation to human disease and to bacteriology as well as bacterial, viral, and fungal pathogens and the mechanism of disease. Prepares student for advance study in microbiology and the health sciences. Standard methods and techniques are emphasized in laboratory. (Titled General Microbiology before 2015-16.)
- BIOL 242 Comparative Vertebrate Anatomy** **2c-3I-3cr**
Prerequisite: 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 2.5 hours. Each meeting includes both lecture and laboratory experiences.
- BIOL 250 Principles of Microbiology** **3c-3I-4cr**
Prerequisite: BIOL 112 or 203 or instructor permission
 An introduction to microbiology focusing on the fundamental principles of microbial structure, modes of reproduction, genetics, and physiology. Emphasizes the importance of microbes in ecological, industrial, immunological, and epidemiological processes. Standard microbiological methods and techniques are emphasized in laboratory.
- BIOL 261 Ornithology** **2c-3I-3cr**
 A study of birds of the region. Indoor laboratory as well as early-morning and possibly weekend field trips required.
- BIOL 272 Conservation of Plant and Animal Resources** **2c-3I-3cr**
Prerequisites: BIOL 201-202 or 103-104
 A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips included.
- BIOL 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.
- BIOL 300 Genetics and Medicine and Nutrition** **3c-0I-3cr**
Prerequisite: BIOL 203 or 241 or CHEM 255
 Examines how our genes play a role in disease and diet. Includes a fundamental background of genetics, as well as specific diseases that are caused by defective genes. Explores how nutrition interacts with the genome and its impact on health and disease.
- BIOL 301 Fundamentals of Epidemiology** **3c-0I-3cr**
Prerequisites: BIOL 104 and 119, or 203; and MATH 216 or 217; or instructor permission
 Introduces epidemiologic principles, concepts, and methods used to study the distribution and determinants of diseases in populations. Includes public health and clinical applications. Covers the history of epidemiology, dynamics of disease transmission, measures of disease frequency and association, study designs, causation, and also considers ethics and public policy issues in epidemiology. (Offered as BIOL 460 before 2016-17.)

- BIOL 310 Applied Entomology and Zoonoses** **2c-3l-3cr**
Prerequisites: BIOL 201, BIOL 220; or instructor permission
 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.
- BIOL 313 Forensic Analysis of DNA** **3c-0l-3cr**
Prerequisite: BIOL 211 or equivalent or instructor permission
 The lecture-only course introduces the identification and assessment of biological evidence in criminal matters using DNA. Presents routinely used broad-based protocols for DNA typing, sample collection, and techniques applied in quality assurance during DNA profiling. Covers important questions about the use of DNA by criminal justice system.
- BIOL 323 Introduction to Toxicology and Risk Assessment** **3c-0l-3cr**
Prerequisites: BIOL 104 or 203; CHEM 102 or 112 or 114; or instructor permission
 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.
- BIOL 331 Animal Developmental Biology** **2c-3l-3cr**
Prerequisite: BIOL 112 or 203; or instructor permission
 Considers comparative and molecular development of vertebrate animals. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.
- BIOL 352 Comparative Animal Physiology** **2c-3l-3cr**
Prerequisites: BIOL 112 or 202, CHEM 231
 A comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.
- BIOL 362 Ecology** **2c-3l-3cr**
Prerequisites: BIOL 112 or 201, BIOL 210 or 220, or instructor permission
 Studies the interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.
- BIOL 364 Immunology** **2c-3l-3cr**
Prerequisites: BIOL 241 or 250; CHEM 102 or 232 or 351; or instructor permission
 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.
- BIOL 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 BIOC 401; may not be taken for duplicate credit.)
- BIOL 402 Advanced Human Anatomy** **3c-3l-4cr**
Prerequisite: BIOL 111 or 202 or instructor permission; not open to students who have successfully completed BIOL 150; not open to students who have completed fewer than 60cr.
 An intensive study of the gross anatomical structures and their functions within the human body. Explores the organization and integration of the human body on a region-by-region basis. For each region of the body, students observe all structures within that region simultaneously. This approach allows students to appreciate the integration of different biological systems within the body. Laboratory sessions center on regional cadaver dissection by groups of students to appreciate 3-D anatomical relationships.
- BIOL 405 Biology of the Cell** **2c-3l-3cr**
Prerequisites: BIOL 111 or 203, CHEM 231, or instructor permission
 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 use current literature on their own as a means of building critical-thinking skills. The student-centered laboratory portion emphasizes individual and group activities.
- BIOL 409 Pharmacology Principles and Applications** **3c-0l-3cr**
Prerequisite: BIOL 106 or 202 or 240
 Explores the principles of the interactions of chemicals with biological systems in the context of human diseases of varied etiology (e.g. genetic, environmental) and clinical presentation. Introduces the general principles of pharmacokinetics and pharmacodynamics, integrating analysis at multiple biological levels (molecular, cellular, systems, organismal) to develop a broad view of the interaction of drugs with biological systems. Develops skills in pharmacological analysis through examination of actual and simulated sets of data. Examines applications of principles to specific fields of pharmacology (e.g., neuro-, cardiovascular, immuno-, endocrine, cancer) and explores the discovery and development of new medications using examples from recent scientific and clinical trial literature.
- BIOL 410 Molecular Biology Topics** **3c-0l-3cr**
Prerequisite: BIOL 203 or 263 or BIOC 301 or CHEM 351
 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.
- BIOL 411 Forensic Biology Laboratory Operations** **2c-2l-4cr**
Prerequisite: BIOL 313 or equivalent or instructor permission
 A broad-based learning experience in multiple areas of Biological Forensics with special emphasis in unique nucleic acid and protein signature(s) patterns associated with the forensic biological evidence. Applies the theory and practice of presumptive and confirmatory testing methods on materials of forensic interest. Features in-depth discussion that integrates advanced characterization of biological evidences as it relates to criminal investigation and interpretation of the criminal justice system.
- BIOL 425 Herpetology** **2c-3l-3cr**
Prerequisite: BIOL 220
 A comprehensive survey of the classes of Amphibia and Reptilia, including their classification, structure, origin, evolution, phylogenetic relationships, distribution, and natural history. Special emphasis is placed on the herpetofauna of Pennsylvania.
- BIOL 431 Ichthyology** **3c-3l-3cr**
Prerequisite: BIOL 220 or instructor permission
 Introduces the biology, taxonomy, natural history, and conservation of freshwater and marine fishes. Examines the morphological and physiological adaptations that have allowed fish, the most diverse group of vertebrates, to thrive across a wide array of environments throughout the globe. Lab emphasizes field collection and identification of fish found in Pennsylvania and the Great Lakes region, but select representatives from other families are also covered. Critically evaluates published scientific papers related to fish biology, physiology, and evolution.
- BIOL 450 Field Biology at Pymatuning Laboratory of Ecology** **3c-3l-4cr**
 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 Field Methods in Ecology and Conservation, Fish Ecology, Behavioral Ecology, Aquatic Botany, Forest Ecology, and Wildlife Conservation. Information regarding specific offerings is available from the department in the spring.
- BIOL 451 Evolutionary Biology** **2c-3l-3cr**
Prerequisites: BIOL 201, 203
 A comprehensive survey of evolution and evolutionary biology, including the history of evolutionary theory, natural selection, microevolutionary and macroevolutionary processes, and the phylogenetic history and classifica-

tion of life on earth. In laboratory, the focus is on learning current methods in population-level and phylogenetic analysis and presenting and leading peer discussions of important and current research in the field.

BIOL 455 Animal Behavior **3c-0l-3cr**

Prerequisite: BIOL 220 or permission

The biological study of animal behavior. Topics include the mechanisms, development, ecology, and evolution of behavior.

BIOL 456 Ecological Toxicology **2c-3l-3cr**

Prerequisites: BIOL 112 or 202, CHEM 112

Studies the impact of chemical pollutants and other stresses on nonhuman biological systems from the subcellular to ecosystem levels. An ecological risk assessment is conducted in the field and laboratory settings.

BIOL 462 Vertebrate Endocrinology **3c-0l-3cr**

Prerequisite: BIOL 104 or 203 or 240 or instructor permission

Examines how hormones, or cell signaling molecules, are produced in specific endocrine tissues and alter the physiology of the of respective target tissues.

BIOL 463 Limnology **2c-3l-3cr**

Prerequisite: BIOL 362

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.)

BIOL 466 Principles of Virology **3c-0l-3cr**

Prerequisite: BIOL 203 or 263, or CHEM 351, or instructor permission

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 469 Circadian Rhythms and Sleep **3c-0l-3cr**

Prerequisite: BIOL 104 or 203 or 240 or instructor permission

Introduces the functions and mechanisms of biological clocks and rhythms in humans and animals, focusing primarily on circadian, or daily, rhythms. Examines how biological clocks keep time and influence behavior and physiology from the molecular level. Explains how circadian rhythms control sleep-wake and other important neurological functions to optimize biological fitness. Explores the consequences of disrupted circadian timing on physical and psychological health and performance.

BIOL 471 Dendrology of the Eastern US **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 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 477 Neurobiology **3c-0l-3cr**

Prerequisite: BIOL 105 or 111 or 202 or 240 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 479 Neurobiology of Addiction **3c-0l-3cr**

Prerequisite: BIOL 104 or 203 or 240 or instructor permission

Examines the biological foundations of addiction, with special emphasis on cellular and molecular mechanisms. Studies: (1) the effects of a wide range of drugs of abuse on brain function, (2) the neural circuitry of addiction, (3) the neurobiological influence of genes and environment on drug taking, and (4) the biological basis for traits linked to drug use, such as personality, memory, and mood. Discusses how cutting-edge biological methods are answering key questions about addiction and how the results of such research can be used to improve clinical treatment.

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 Office of the Provost. 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 Office of the Provost

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.

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 course work 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-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 content is different.

BIOL 493 Biology Internship **var-3-12cr**

Prerequisites: Biology major with at least 60cr, 2.5 cumulative GPA, and permission of the director of internships and the chairperson

Selected students have the 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.

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-01-3cr

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 336 Law of Business Organizations 3c-01-3cr

Prerequisite: BLAW 235

A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

BLAW 441 The Law of Property Oil and Gas Leasing I 3c-01-3cr

Prerequisite: BLAW 235

Gives students an understanding of fundamental energy law, including oil and gas law. Includes analysis of natural resource leases and contracts, rights and ownership of the mineral estate, law of capture, contracts, clauses, and covenants of the oil and gas lease, oil and gas operating agreements, title and conveyance of oil and gas leases, pooling and utilization on private and federal lands, easements and right of ways in connection with natural resource exploration, environmental considerations and impacts of natural resource drilling and exploration, the legal structure of the energy industry, (Public Utility Holding Company Act, Federal Energy Regulatory Commission) land use restrictions, and eminent domain.

BLAW 442 The Law of Property Oil and Gas Leasing II 3c-01-3cr

Prerequisite: BLAW 441

Second legal course in the energy/oil and gas sequence and builds upon and advances concepts from the first course. Specifically geared toward the sophisticated legal understanding required to be employed as "landman" in the oil and gas fields. Covers these topics: the Habendum Clause, the drilling and rental clause, dry hole, cessation of production, and drilling operation provisions, delayed rental and bonus provisions, forfeiture and related provisions, implied covenants, prudent operator standard, implied drilling covenants, protection covenants, development, marketing and reasonable care covenants, assignments of royalties, royalty calculation under various state laws, drilling, and operating agreements, assignment of working interest, pooling and utilization issues and problems, oil and gas forms and leases, lien subrogation rights, environmental impacts from drilling standpoint and landowner standpoint. Industry guest speakers may also address these issues.

BTED: Business and Technology Education
Department of Adult and Community Education
College of Education and Communications

BTED 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. (Offered as BTST 401 before 2014-15.)

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.

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.

BTED 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 442 before 2014-15.)

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.

CDFR: Child Development and Family Relations
Department of Human Development, Fashion, and Interior Design
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 from a global perspective. Coverage includes consideration of theories and research findings from prenatal development through pre-adolescence. Included among the topics covered are 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

A developmental and interactional approach to understanding family studies and aids in understanding family life, with a primary emphasis on contemporary families. Relevant theoretical perspectives of how families operate are discussed. Areas covered include trends in family structures and functions globally, conducting research in family studies from a global perspective, diversity among families, gender roles in dating and marital relationships from a global perspective, communication and conflict resolution, human sexuality in contextual relationships, dating and singlehood, combining work and family roles, trends from a global perspective on parenting, effects of race and class on families, domestic violence, and divorce and remarriage.

- CDFR 310 Child Observation and Assessment** **3c-01-3cr**
Prerequisites: 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 from birth to school age, including the Individualized Family Service Plan (IFSP) and the Individualized Education Plan (IEP) process. Special emphasis is 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**
Prerequisites: Grade of “C” or better in CDFR 218 and previous 200- and 300-level child development and family relations courses
 Introduces the historical background of the fields of childcare and early childhood education and current educational issues and theories affecting 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 are integrated into course work. Participation in a community service project is a mandatory part of the course. Completion of this course with a grade of “C” or better is required for graduation.
- CDFR 420 Infant Toddler Mental Health** **3c-01-3cr**
Prerequisite: CDFR 410
 An introduction and overview of Infant Mental Health. Focuses on strengths in infants and families, a relational framework for assessment and intervention, and a prevention orientation. Emphasizes an understanding of how principles of infant mental health provide a foundation for working with children and families across settings and disciplines.
- 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.
- CDFR 426 Techniques of Parent Education** **3c-01-3cr**
Prerequisites: 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 Human Service Programs** **3c-01-3cr**
Prerequisite: Child development and family relations major or minor or instructor permission
 Facilitates the acquisition of special knowledge and competencies needed by successful administrators of human service programs, including proposal writing, budgeting and management, staff selection and training, and program evaluation. (Titled Administration of Child Development Centers before 2016-17.)
- CDFR 428 Family Dynamics** **3c-01-3cr**
Prerequisites: 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-4l-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 Office of the Provost
 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 child development and family relations program, human development, fashion, and interior design department, and college dean; completion of 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 100 Preparatory Chemistry** **3c-0i-3cr**

A discussion of the fundamental terminology, calculations, and concepts of chemistry, including scientific measurements and calculations, simple definitions and concepts, atomic structure, the mole, mass and solution stoichiometry, ionic and covalent bonding, and the naming of atoms, molecules, and ions. Prepares science majors with limited backgrounds in chemistry for freshman chemistry courses and may not be used toward any major or minor or Liberal Studies. Restricted to students in the Colleges of Natural Sciences and Mathematics and Health and Human Services. Students who have earned a "C" or better in a higher number chemistry course may not take this course.

CHEM 101 College Chemistry I **3c-2i-4cr**

Basic principles and concepts of inorganic chemistry are developed using atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion illustrates physical and chemical properties in a qualitative and quantitative manner. For selected majors within the College of Health and Human Services and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement.

CHEM 102 College Chemistry II **3c-2i-4cr**

Prerequisite: CHEM 101

Fundamental principles and concepts of organic chemistry and biochemistry are studied. 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. For selected majors within the College of Health and Human Services and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement.

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 chemistry major or minor.

CHEM 111 General Chemistry I **3c-3i-4cr**

An introductory course for science and preprofessional health majors. First half of a two-semester sequence designed to give students the foundation of knowledge and laboratory techniques required to successfully complete a degree program in the sciences or gain entry into professional health programs. Topics include atomic theory, an introduction to chemical reactions, stoichiometry, gas laws, thermochemistry, chemical bonding, and molecular geometry.

CHEM 112 General Chemistry II **3c-0i-4cr**

Prerequisite: CHEM 111 or 113

An introductory course for science and preprofessional health majors. Second half of a two-semester sequence designed to give students the foundation of knowledge and laboratory techniques required to successfully complete a degree program in the sciences, or gain entry into professional

health programs. Topics include the solid states, solution theory, kinetics, equilibrium, thermodynamics, acids and bases, and electrochemistry.

CHEM 113 Advanced General Chemistry I **3c-3i-4cr**

Prerequisites: Placement into MATH 121 or 125, high school chemistry For well-prepared freshmen with high school chemistry and good math skills. Topics include atomic theory, chemical reactions, stoichiometry, thermochemistry, chemical bonding, molecular geometry, gas laws, the liquid and solid state, and solution theory. Topics are covered in greater depth and with more challenging problem solving than General Chemistry. For majors within the College of Natural Sciences and Mathematics and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement for those students.

CHEM 114 Advanced General Chemistry II **3c-3i-4cr**

Prerequisite: Grade of "C" or better in CHEM 113

A continuation of Advanced General Chemistry I. Topics include solutions, chemical kinetics, equilibrium and thermodynamics, acids and bases, buffers, and electrochemistry. Topics are covered in greater depth and with more challenging problem solving than General Chemistry. For majors within the College of Natural Sciences and Mathematics and to fulfill the Liberal Studies Natural Science Laboratory Sequence requirement for those students.

CHEM 214 Intermediate Inorganic Chemistry **2c-3i-3cr**

Prerequisite: CHEM 112 or 114 or instructor permission

An in-depth study of inorganic compounds beyond what is presented in General Chemistry. Topics include Lewis structures and Lewis acid-base chemistry, an introduction to inorganic solids, coordination compounds, and bioinorganic chemistry. Provides a foundational understanding of inorganic chemistry to allow students to begin research and prepare for upper-level courses.

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 290 Chemistry Seminar I **1c-0i-1cr**

Prerequisite: CHEM 100 or 111 or 113

Provides knowledge to students concerning undergraduate research and career possibilities based on a degree in chemistry or biochemistry. Much of this class consists of presentations to students by research faculty in chemistry, biochemistry, and other departments across the university.

CHEM 325 Analytical Chemistry I **3c-3i-4cr**

Prerequisite: CHEM 231

An introduction to the principles of analytical chemistry, including gravimetric, volumetric, and basic instrumental analysis. Special emphasis is placed on both perfecting the student's laboratory technique and on the application of general chemical knowledge through problem solving.

CHEM 326 Analytical Chemistry II **3c-3i-4cr**

Prerequisites: CHEM 325, 341

A more detailed examination of the principles of analytical chemistry. Student learns theoretical and practical aspects of sampling, data acquisition, and spectroscopic, electrochemical, chromatographic, thermal, mass spectrometric, and affinity methods of analysis.

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, 341 Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.		
CHEM 341 Physical Chemistry I	4c-0l-4cr	
Prerequisites: PHYS 112 or 132; MATH 126; grade of "C" or better in CHEM 112 or 114 Foundations of chemical thermodynamics, equilibria, kinetics, quantum mechanics, and spectroscopy.		
CHEM 342 Physical Chemistry II	3c-0l-3cr	
Prerequisites: CHEM 341, MATH 225 (may be taken concurrently) In-depth exploration and applications of chemical thermodynamics, equilibria, kinetics, quantum mechanics, and spectroscopy.		
CHEM 343 Physical Chemistry Laboratory I	0c-3l-1cr	
Prerequisite: CHEM 341 (may be taken concurrently) 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 390 Chemistry Seminar II	1c-0l-1cr	
Prerequisite: CHEM 290 or 232 A seminar course to provide knowledge regarding effective oral and written scientific communication and the ethics of scientific practice. Students learn how to read and evaluate a research paper from the literature, how to formulate and write a research proposal, and how to present a research poster. Attendance of seminars outside of class time is required.		
CHEM 411 Advanced Inorganic Chemistry	2c-3l-3cr	
Prerequisites: CHEM 214, 341 Discussion of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics. In the laboratory portion, techniques used in the synthesis and characterization of inorganic compounds are explored.		
CHEM 460 Chemistry and Physics of Materials	3c-0l-3cr	
Prerequisites: CHEM 112 or 114 and PHYS 112 or 132 Provides unified treatment of materials. Emphasizes physical and chemical origins of material properties. Multidisciplinary approach using chemistry, physics, and geoscience to study bonding and crystal chemistry. An interdisciplinary approach to the study of material phenomena involving electronic devices, energy storage, second harmonic generation, superconductivity, and others.		
CHEM 461 Modern Diffraction	3c-0l-3cr	
Prerequisites: CHEM 112 or 114 and PHYS 112 or 132 Investigates advances in crystallography and its applications to modern science. Emphasizes powder diffraction, including Rietveld analysis. Develops proficiency in data collection, phase analysis, and structure refinement and shows how crystallographic science can address scientific problems.		
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 490 Chemistry Seminar III	1c-0l-1cr	
Prerequisite: CHEM 390 A discussion of recent trends in chemical thought. Oral and written reports on assigned readings, library, or laboratory research. Guest lecturers. A seminar course to provide knowledge to students regarding effective oral and written scientific communication. Students refine their skills in reading and evaluating research papers from the literature, write a formal research paper, and present a research seminar. The combination of CHEM 390 and 490 counts as one writing-intensive course.		
CHEM 493 Internship in Chemistry	var-4-9cr	
Prerequisites: CHEM 111 or 113, CHEM 112 or 114, 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	
Prerequisites: CHEM 231 and permission of chairperson Supervised undergraduate research, in conjunction with a faculty member in the Chemistry Department.		
CHIN: Chinese Department of Foreign Languages College of Humanities and Social Sciences		
CHIN 101 Elementary Chinese I	4c-0l-4cr	
For beginning students. Introduces the Chinese language, with attention focused on the three modes of communication: interpretive listening and reading, interpersonal speaking and writing, and presentational speaking and writing. Students learn pronunciation, fundamental grammatical patterns, and how to write approximately 250 characters. Also imparts knowledge of Chinese culture and society. Attendance is required. May not register for or take a D/F repeat in CHIN 101 when credit has already been received for a higher-numbered Chinese course.		
CHIN 102 Elementary Chinese II	4c-0l-4cr	
Prerequisite: CHIN 101 A continuation of Elementary Chinese I, focusing on the three modes of communication—interpretive listening and reading, interpersonal speaking and writing, and presentational speaking and writing—to build proficiency in using the Chinese language in real-life situations. Also imparts knowledge of Chinese culture and society. Attendance is required. May not register for or take a D/F repeat in CHIN 102 when credit has already been received for a higher-numbered Chinese course.		
CHIN 201 Intermediate Chinese	4c-0l-4cr	
Prerequisite: CHIN 102 A continuation of previous work on the three modes of communication: interpretive listening and reading, interpersonal speaking and writing, and presentational speaking and writing, so that students can function in everyday situations. Also imparts knowledge of Chinese culture and society. Liberal Studies credit is given. Attendance is required. May not register for or take a D/F repeat in CHIN 201 when credit has already been received for a higher-numbered Chinese course.		
CHIN 202 Intermediate Chinese IV	3c-0l-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 121 University Foundations 2c-0l-2cr

Provides freshmen on the Punxsutawney Regional Campus with a transition from secondary education to collegiate-level learning and expectations. Foremost, teaches critical thinking. In addition, interests and majors are explored, and fundamental learning skills and university support services and policies are taught.

CHSS 342 Social Studies Teaching Lab 0c-1l-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 343 Applied Practice in Secondary English Language Arts 1c-0l-1cr

Prerequisite: EDUC 242

Corequisite: Concurrent with EDUC 342

In conjunction with EDUC 342, prepares candidates for field experience in secondary English language arts. Students continue to develop skills for school-site observation, are introduced to philosophical models of classroom management, and receive instruction about completing the Step 2 portfolio requirement. Provides opportunity for students to apply understanding of pedagogical content knowledge to observation and lesson design and to familiarize themselves with teacher research methodology.

**CNSD: Counseling and Student Development
The Counseling Center
Student Affairs Division**

CNSD 150 Life Skills: Improving Your Social and Emotional Intelligence 1c-0l-1cr

Prerequisite: Instructor permission

Provides practical, hands-on, cognitive, emotional, and interpersonal skills that 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.

**COMM: Communications Media
Department of Communications Media
College of Education and Communications**

COMM 101 Communications Media in American Society 3c-0l-3cr

Required of communications media 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 143 Media Wellness 3c-0l-3cr

Helps students understand how media affects wellness. Analyzes and evaluates media consumption and media effects (both positive and negative) in a variety of genres including traditional and social media. Explores concepts

of media literacy, including evaluation and analysis of media content. Successful completion of this course fulfills the Liberal Studies Dimensions of Wellness requirement. Other 143 courses also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

COMM 150 Aesthetics and Theory of Communications Media 3c-0l-3cr

Prerequisite or Corequisite: COMM 101 or JRNL 105

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-0l-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-0l-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/F repeats and may not be counted for duplicate credit.)

COMM 205 Making Presentations with Media 3c-0l-3cr

Prerequisite: 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 206 History and Theory of Making Games 3c-0l-3cr

Prerequisite: COMM 150

Explores the origins of games and game play into the contemporary era of video and electronic games. Introduces the history of the games industry and the process of how games are created. Analyze games through an ethical and developmental framework, as well as explores how games are used for entertainment, teaching, and training.

COMM 230 Global Media and Communication 3c-0l-3cr

An overview of global media and international communications. Describes how international communication and development of global media have influenced relationships among nations and among people with different cultural backgrounds. Covers social, economic, and political situations before and after globalization. Also covers press theories, media ownership, access to media, and the impact of media communications on culture and people living in developed and developing countries. (Titled Issues in International Communication before 2014-15.)

COMM 240 Communications Graphics 3c-0l-3cr

Prerequisites: COMM 101 or JRNL 105, communications media major or minor, photography and digital imaging certificate or digital history certificate enrollment 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 or JRNL 105, communications media major or minor, popular music studies certificate, audio production certificate, or digital history certificate enrollment or 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 audio recording in the classroom. Provides hands-on experience through labs and projects to be completed outside of class.

COMM 251 Television Production 3c-01-3cr

Prerequisites: COMM 101 or JRNL 105, communications media major or minor, photography and digital imaging certificate enrollment or 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 261 Teamwork and Communication Skills for College and Career 3c-01-3cr

Focuses on developing teamwork and communication skills for the presentation of career-oriented, technically rich information. Applies foundational theories of communication and the rhetoric of public communication and use that understanding to present academic research, data, and technical information orally and in written form. Prepares students to engage audiences, frame and present arguments, and develop the ability to present their topic and its significance in technical and non-technical settings. Explores different types of presentation situations including team oral presentations, team written reports, poster session presentations, platform presentations, symposia, and panel discussions. Prepares students to produce appropriate media to supplement their presentations. Presentations are video recorded for individual, peer, and instructor evaluation.

COMM 271 Beginning Photography 3c-01-3cr

Prerequisites: COMM 101 or JRNL 105, communications media major or minor, interior design major, photography and digital imaging certificate or digital history certificate enrollment 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 or JRNL 105; ENGL 101 and 202 (grades of "C" or better) or 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 are written. May be offered under a different topic area such as: COMM 303 Scriptwriting: Comedy or COMM 303 Scriptwriting: Drama. May be repeated for a maximum of six credits under a different topic area. Students who need to D/F repeat COMM 303 may repeat the course under a different variable title.

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 2-D Digital Game Development 3c-01-3cr

Prerequisite: COMM 206
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.

COMM 315 Persuasive Media Writing 3c-01-3cr

Prerequisites: COMM 101 or JRNL 105; ENGL 101 and 202 (grades of "C" or better)
Introduces concepts of writing persuasive announcements, such as commercials and promotional messages, and other content for digital media. Analyzes persuasive media announcements, and incorporates writing with the use of evidence, emotion, and reasoning to reach audiences. Aids in understanding how to create media messages that influence audience attitudes and behaviors.

COMM 325 Women in Media 3c-01-3cr

An overview of women in media (including television, film, radio, the Internet, etc.) and the historical development, along with social context that influence women's involvement in the media, both nationally and internationally. Analyzes topics related to media effect theories and portrayal of women in media that influence some of the issues women face in their gender roles. Also identifies key women in media from the past and present and their contributions to the field.

COMM 330 Instructional Design for Training and Development 3c-01-3cr

Prerequisites: COMM 101 or JRNL 105; ENGL 101 and 202 (grades of "C" or better) or 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 or JRNL 105
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
An 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 miniseries and made-for-TV movies.

- COMM 348 Animation** **3c-01-3cr**
Prerequisite: COMM 150
 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.
- COMM 349 Radio Production** **3c-01-3cr**
Prerequisites: COMM 101 or JRNL 105; communications media major or minor, audio production certificate enrollment or 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 350 Advanced Radio Production** **3c-01-3cr**
Prerequisites: COMM 349; cannot be taken concurrently; communications media major *or* communications media minor *or* audio certificate status
 Refines and supplements the production skills introduced in COMM 349, advancing beyond isolated off-air announcements to producing radio programs of substantial length and complexity. Introduces advanced radio skills including preproduction and planning for long form programming, live program production, mobile recording, advanced sound mixing and editing, sequencing, mastering, and more. Projects may include radio news production, radio documentary, public affairs, and radio drama.
- COMM 351 Advanced Video Production** **3c-01-3cr**
Prerequisite: COMM 251
 A production course that emphasizes advanced field production techniques. Some of the topics covered include; field lighting, video post-production editing with A-B roll, on-line editing, and non-linear editing. Provides hands-on experience through projects and field trips. May be offered under a different topic area such as: COMM 351 Advanced Video Production: Documentary Video or COMM 351 Advanced Video Production: Music Videos. May be repeated for a maximum of six credits under a different topic area. Students who need to D/F repeat COMM 351 may repeat the course under a different variable title.
- COMM 354 Media Law and Policy** **3c-01-3cr**
Prerequisite: COMM 150 or instructor permission
 Surveys areas of law and policy regulating commercial and consumer use of media technologies. Covers law and policy pertaining to broadcasting and cable, intellectual property, station licensing and renewal, defamation, privacy, Internet regulation. 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 mediated society. (Titled Broadcast Regulation before 2015-16.)
- COMM 360 Digital Sports Production** **3c-01-3cr**
Prerequisite: Instructor permission
 An introduction to the pre-production, production, and post-production processes of live and recorded sporting events. Engagement in all aspects of the production process, including live production for webcasting, video-recording and editing sporting events. Attendance and participation is required in the production of selected local sporting events, which may include nights and weekends outside of regular class time. This course may be repeated one time for a maximum of six credits.
- 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 JRNL 105, or 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 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 to create new and influential images for modern and future utilization. Students are required to have access to a digital camera.
- 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. 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: Communications media 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: Communications media major 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**
 Teaches students 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. 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 or JRNL 105; ENGL 101 and 202 (grades of "C" or better) or 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 3-D Game and Simulation Design and Development** **3c-01-3cr**
Prerequisite: COMM 348
 Examines the theory and development of 3-D digital games and simulations from a communications media perspective. Learners are exposed to topics such as the logical structure of 3-D games and simulations, 3-D game technology, and the process of 3-D digital game development. Learners are also exposed to the history and organizational structure of the 3-D game industry as well as its theory and history.

- COMM 407 Television Feature Production** **3c-01-3cr**
Prerequisite: COMM 251
 Teaches the creative and technical elements necessary to produce feature programming for television. Combines theory and practice, with an emphasis on practice. Provides knowledge and skills on video capture, audio pick-up and mixing, and lighting design for field production and in-studio production. Produces feature stories for television, which includes filming on and off campus, script writing, interviewing, and editing as practiced at an international level.
- COMM 408 Media Field Studies** **3c-01-3cr**
Prerequisites: COMM 101 or JRNL 105, 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 414 Music, Media, and Culture** **3c-01-3cr**
Prerequisites: Communications media major or minor, or popular music studies certificate and junior standing
 Examines the intersections between media technologies, popular music, and culture. May include technology's constant influence in musical performance, production, and distribution; the music industry's marketing of popular music; popular music's relationship to cultural identity (e.g., race, gender, sexuality); and music as a cultural practice.
- COMM 420 Media Portrayal of Crime** **3c-01-3cr**
Prerequisite: COMM 101 or JRNL 105 or CRIM 101 or departmental permission
 An examination of the portrayal of crime in the media (television, film, newspapers, music, video games, electronic/Internet). This includes, but is not limited to, victims, offenders, criminal justice actors, and the criminal justice system. Of importance is how the media select what is newsworthy and how they describe and/or alter criminal justice issues. Attention is paid to the media's influence on perceptions of crime, the ethics behind the media's perceptual influence, criminology and criminal justice issues of the general population, and the resultant criminal justice policies. Seminar based. (Also offered as CRIM 420; may not be taken as duplicate credit.)
- 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 3-D Modeling and Animation for Games and Simulations** **3c-01-3cr**
Prerequisite: COMM 348
 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 multitrack recording. Student is expected to produce a sound recording for a specific use of professional quality. May be offered under a different topic area such as: COMM 449 Advanced Audio Recording Techniques: Music Recording or COMM 449 Advanced Audio Recording Techniques: Instructional Media. May be repeated for a maximum of six credits under a different topic area. Students who need to D/F repeat COMM 449 may repeat the course under a different variable title.
- COMM 451 Broadcast News Process** **3c-01-3cr**
Prerequisite: COMM 251 or permission
 Engages in reporting and presenting broadcast news programs. Content and assignments include 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. 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 communications media 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: Communications media majors only and COMM 395
 Students compile and present a series of works produced through previous communications media 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 **9cr**

Prerequisites: COMM 395, 2.0 overall GPA and department approval
Supervised professional summer work experience in communications media. Internship sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, duration of internship, and work hours are tailored to students' career goals. Sites represent a broad spectrum of communications and media in business, education, health, or other agencies. Students must complete 360 hours of internship work experience and a culminating internship project. A maximum of 15 credits of internship and/or practicum are permitted toward a degree program. Students whose internship responsibilities include regular contact with minors are required to take the Protection of Minors Training. All internship sites are required to be compliant with University internship policies and requirements.

COSC: Computer Science
Department of Computer Science
College of Natural Sciences and Mathematics

COSC 101 Computer Literacy **3c-0l-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 computer science 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/F repeats but may not be counted for duplicate credit.

COSC 105 Fundamentals of Computer Science **3c-0l-3cr**

The first course for computer science majors. Required of all computer science 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 108 Introduction to Programming via Alice **3c-0l-3cr**

An introduction to the development of algorithmic solutions to a variety of problems and the development of computer programs to implement the solutions. The Alice programming language and interactive development environment is incorporated to introduce fundamental algorithmic/programming concepts including variables, assignments, conditionals, loops, functions, and arrays through an interactive movie animation paradigm. These concepts are then applied to a standard programming language. Includes an introduction to the Java programming language. (May not receive credit for both COSC 108 and 110.)

COSC 110 Problem Solving and Structured Programming **3c-0l-3cr**

An introduction to the development of algorithmic solutions to a variety of problems and the development of computer programs to implement the solutions. Explores standard programming structures used to introduce fundamental algorithmic/programming concepts including variables, assignments, conditionals, loops, functions, and arrays and their role in problems solving. Emphasizes structured programming in the development of algorithm solutions to common problems. Object-oriented paradigm is introduced at a basic level.

Cyber Wellness **3c-0l-3cr**

Investigates the different categories of cyber wellness and how they affect emotional, physical, social, and intellectual wellness. Focuses on demonstrating intellectual agility and creativity in order to maintain physical wellness while using technology. Examines the effect technological changes have had on various disciplines and their impacts on society in relation to health and wellness. Discusses theories and principles related to the physical, mental, social, and emotional aspects of personal computer usage

including cyberspace. Completion of COSC 143 fulfills the Liberal Studies Dimensions of Wellness requirement. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

COSC 201 Internet and Multimedia **3c-0l-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/F repeats and may not be counted for duplicate credit.)

COSC 210 Object-Oriented and GUI Programming **3c-0l-3cr**

Prerequisite: COSC 108 or 110
An in-depth introduction to the Object-Oriented Programming (OOP) paradigm, including encapsulation, inheritance, and polymorphism. Focuses on designing, implementing, and using objects. Includes an introduction to Graphical User Interface (GUI) design and programming.

COSC 220 Applied Computer Programming **4c-0l-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-0l-3cr**

Prerequisites: COSC 110, 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/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-0l-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-0l-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 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, backup 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 computer science. After an overview of the phases of the software life cycle, current methodologies, tools, and techniques being applied to each phase are discussed in depth with localized exercises given to reinforce learning of concepts.		
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 multiuser 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.		
COSC 352 LAN Design and Installation	3c-01-3cr	
Prerequisite: BTST 273 or IMFG 250 or COSC 108 or 110		
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 IMFG 352. 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: Grade of "C" or better in COSC 310 and junior status		
Introduces computer graphics hardware and software. Explores and implements 2-D and 3-D modeling and transformations, viewing transformations, projections, rendering techniques, lighting, and shading using a current cross-platform 3-D graphics API. Includes creation of complex, photorealistic images, and animation principles.		
COSC 356 Network Security	3c-01-3cr	
Prerequisites: 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.
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: Grade of "C" or better in COSC 310		
Introduces the field of artificial intelligence. Explores and implements solutions using classical and modern artificial intelligence techniques. Includes state space search, logical inference, expert systems, optimization, knowledge representation, machine learning, handling uncertainty, and soft computing.		
COSC 410 Computer Architecture	3c-01-3cr	
Prerequisites: COSC 300, 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, 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 429 Digital Forensics	3c-01-3cr	
Prerequisites: COSC 110 or equivalent programming course, junior standing or instructor permission		
Takes a detailed, hands-on approach to the use of computer technology in investigating computer crime. From network security breaches to child pornography, the common bridge is the demonstration that particular electronic media contains incriminating evidence. Using modern forensic tools and techniques, students learn how to conduct a structured investigative process to determine exactly what happened and who was responsible, and to perform this investigation in such a way that the results are useful in criminal proceedings. Real-world case studies are used to provide a better understanding of security issues. Unique forensics issues associated with various operating systems including Linux/Windows operating systems and associated applications are covered.		

COSC 430 Introduction to Systems Programming 3c-0l-3cr**Prerequisites:** Grade of "C" or better in COSC 300 and 310 or instructor permission

An in-depth introduction to a systems programming, system programming language(s) and application of those language(s) to systems-level problems. The focus is on programming constructs that are closely aligned with the architecture of a digital computer including those providing portability between platforms, dynamic allocation and management of virtual memory, complex in-memory data structures, reading/writing binary data using sequential and random access, pointer arithmetic/manipulation, and interaction between threads/processes.

COSC 432 Introduction to Operating Systems 3c-0l-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 454 Information Assurance Administration 3c-0l-3cr**Prerequisite:** COSC 316 or instructor permission

Explores the various issues pertinent to maintaining acceptable levels of information security within organizations. Addresses issues involved in administering and managing information security systems. Intended to raise awareness of information security issues across organizations.

COSC 460 Theory of Computation 3c-0l-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 465 Distributed Processing and Web Services 3c-0l-3cr**Prerequisites:** COSC 365 or 310 and instructor permission

An advanced study into architecture of Internet systems and the process of developing distributed computer applications running on the Internet and/or other networks. Presents an in-depth understanding of distributed processing technologies including socket programming, RPC, RMI, EJBs, DCOM, .NET, SOAP, and Web services. Emphasis is placed on the use of XML to support multi-party heterogeneous distributed applications and includes XML fundamentals (e.g., DTDs, XML schemas, XPath, XSLT, SAX, and DOM), and Web services (e.g., SOAP, WSDL, UDDI, and ebXML). Students complete hands-on projects utilizing mentioned technologies.

COSC 473 Software Engineering Practice 3c-0l-3cr**Prerequisite:** COSC 319 or instructor permission

Planning, design, and implementation of large software systems using software engineering techniques. Students work on project teams on real or realistic software development projects. Credit for either COSC 473 or 493, but not both, may count toward computer science major requirements for graduation; the other course credits will be counted as free electives.

COSC 480 Seminar on Technical Topics 0c-1l-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 Office of the Provost

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 493 Internship in Computer Science var-6-12cr**Prerequisites:** COSC 105, 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 3cr of the first 6cr of COSC 493 and 3cr of the last 6cr of COSC 493 may be applied toward the credit-hour requirement for a major in computer science. Internship can be completed as one 12cr unit over a minimum of 23 weeks or in 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 Communications**
COUN 253 Counseling in School Settings 3c-0l-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.

**CRIM: Criminology
Department of Criminology and Criminal Justice
College of Health and Human Services**
CRIM 101 Crime and Justice Systems 3c-0l-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-0l-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-0l-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-0l-3cr**Prerequisite:** 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.

<p>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 on understanding the respective roles played by judges, prosecuting attorneys, defense counsel, police, probation officers, and other court-related personnel in the criminal court process.</p>	<p>CRIM 323 Cybersecurity and the Law 3c-01-3cr Prerequisite: CRIM 101 or 102 Examines the scope of cybercrime and its impact on 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.</p>
<p>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.</p>	<p>CRIM 344 Terrorism 3c-01-3cr Prerequisite: CRIM 101 or 102 or instructor permission An in-depth study of the legal and international issues that the United States faces in response to combating international terrorism. The emphasis is placed on identifying causes of terrorism and the most plausible threats; terrorist networks, their commonalities and differences, and the difficulty in countering; and determining appropriate responses, to include political and legal implications, threat analysis, physical security, and target hardening. (Also offered as PLSC 344; may not be taken as duplicate credit.)</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>CRIM 306 Criminological Research Methods 3c-01-3cr Prerequisites: CRIM 101, 102, junior standing An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.</p>	<p>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.</p>
<p>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.</p>	<p>CRIM 400 Theoretical Criminology 3c-01-3cr Prerequisites: CRIM 101, 102, 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.</p>
	<p>CRIM 401 Contemporary Issues in Criminology 3c-01-3cr Prerequisites: CRIM 101, 102, 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.</p>
	<p>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.</p>

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 420 Media Portrayal of Crime 3c-01-3cr**Prerequisite:** CRIM 101, JRNL 105, or COMM 101, or departmental permission

An examination of the portrayal of crime in the media (television, film, newspapers, music, video games, electronic/Internet). This includes, but is not limited to, victims, offenders, criminal justice actors, and the criminal justice system. Of importance is how the media select what is newsworthy and how they describe and/or alter criminal justice issues. Attention is paid to the media's influence on perceptions of crime, the ethics behind the media's perceptual influence, criminology and criminal justice issues of the general population and the resultant criminal justice policies. Seminar based. (Also offered as COMM 420; may not be taken as duplicate credit.)

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 482 Independent Study in Criminology var-1-3cr**Prerequisites:** CRIM 101, 102, prior approval through advisor, faculty member, and Office of the Provost

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**Prerequisites:** CRIM 101, 102, 12cr from CRIM courses, 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. Six credits 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.

CRLG 101 Arabic I	CRLG 113 Swedish I
CRLG 109 Korean I	CRLG 114 Hebrew I
CRLG 112 Russian I	CRLG 115 Swahili I

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.

CRLG 151 Arabic II	CRLG 162 Russian II
CRLG 155 Hindi II	CRLG 163 Swedish II
CRLG 159 Korean II	CRLG 164 Hebrew II
CRLG 161 Portuguese II	CRLG 165 Swahili II

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.

CRLG 201 Arabic III	CRLG 212 Russian III
CRLG 202 Chinese III	CRLG 214 Hebrew III
CRLG 209 Korean III	CRLG 215 Swahili III

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.

CRLG 251 Arabic IV	CRLG 262 Russian IV
CRLG 259 Korean IV	CRLG 264 Hebrew IV

DANC: Dance
Department of Theater and Dance
College of Fine Arts
DANC 102 Introduction to Dance 3c-01-3cr

Explores dance as communication, ritual, social engagement, entertainment, and as an art form. Dance history, genealogy, aesthetics, critical analysis and response, and the creative process are examined. Class experience includes viewing and critical analysis of professional dance works, attending at least two live productions, and engaging in the creative process in practice and performance.

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 introductory- or advanced-level dance classes from 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 introductory- or advanced-level dance classes from 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 introductory- or advanced-level dance classes from 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 485 Dance Studio **3c-01-3cr**

Prerequisite: DANC 250 or 260 or 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.

DISB: Disability Services
Department of Communication Disorders, Special Education, and Disability Services
College of Education and Communications

DISB 201 Customized Employment: Disability Awareness **3c-01-3cr**

A historical perspective and stereotypical treatment of persons with disabilities, the impact of community integration and empowered living for persons with disabilities, the capabilities and challenges faced by persons with various disabilities. Also considers how current issues, such as health care, housing, Social Security, and employment, have on the lives of persons with disabilities.

DISB 302 Customized Employment: Service Coordination **3c-01-3cr**

Prerequisite: DISB 201
An overview of the Intellectual and Developmental Disability Service System, consumer controlled services and available waivers for persons with disabilities. Also makes the distinction between supported employment and customized employment and the supports available in print, via the Intellectual and Developmental Disability Service System agencies and legislation.

DISB 403 Customized Employment: Assessment and Job Development **3c-01-3cr**

Prerequisite: DISB 302
A holistic approach to providing job-coach services in community setting. Content emphasizes understanding the processes involved in bringing a consumer through the Vocational/Transition Assessment process, developing and analyzing potential jobs based on consumer assessment data, the development and implementation of accommodations for consumers with behavioral/psychiatric disorders, as well as the impact the American with Disabilities Act has on the provision of Job Coaching services.

DISB 404 Customized Employment: Systematic Instruction and Fading **3c-01-3cr**

Prerequisite: DISB 403
A holistic approach to providing job coach services in community setting. Content emphasizes understanding the three essential components of systematic instruction, the development and implementation of instructional programs that include comprehensive fading and follow-up plans and the collection, graphing, and analysis of the assessment, instructional, and follow-up data.

DISB 440 Ethical and Professional Behaviors **1c-01-1cr**

Prerequisites: Disability services major, junior standing, 2.75 GPA
Emphasizes the professional standards and ethical behaviors of disability services professionals. Covers information about and the laws surrounding the ages of birth to three years and over 21 years of age. Students are exposed to the wide range of services in which they can be employed.

DISB 493 Internship/Field Training **var-12cr**

Prerequisites: DISB 440 and 2.75 GPA
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. (Offered as EDEX 493 before 2017-18.)

DVST: Developmental Studies
Department of Developmental Studies
College of Education and Communications

DVST 070 Reading Skills for College Study **3c-01-3cr**

Note: Students who score 77 and below on the COMPASS post-test (administered at the end of this course) are required to enroll in DVST 110 the following semester.

Assists in the development of college-level reading skills with an emphasis on textbook reading. Includes literal and critical comprehension skills, vocabulary development, and reading efficiency. Carries institutional, non-degree credit, and attendance is required.

DVST 083 Introduction to College Math **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, percent, data analysis, graphs, statistics, properties and operations on real numbers, simplifying algebraic expressions, and solving equations and inequalities. Carries institutional, nondegree credit. (Offered as DVST 095 before 2015-16.)

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 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/F repeats but may not be counted for duplicate credit.)

DVST 200 Academic Transition Seminar 1c-01-1cr

Prerequisite: Recommended for students from regional campuses
Acclimates the student to the curricular and cocurricular experience of the main campus of IUP. Emphasizes campus systems and resources, the application of theories of change as related to transition, and major and career planning as lifelong learners. Recommended for transfer students, particularly targeting students moving from a satellite campus to the Indiana campus.

DVST 250 Role of the Peer Educator: Theory, Practice, and Assessment 1c-01-1cr

Prerequisite: 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 Communications

Note: Early childhood education courses are restricted to majors with a 3.0 cumulative GPA.

ECED 112 Childhood Development Birth–Age 5 3c-01-3cr

Presents the foundations, theoretical, and practical aspects of the development of young children, focusing on various learning theories/theorists and the developmental stages and needs of children from birth through age five. Examines the various stages of child development with a focus on a review of the research, theories, and theoretical program models, and types of early childhood programs; discusses available community resources, professional organizations, and standards of ethical behavior and practice all in an exploration of child development and contemporary educational, cultural, social, and emotional issues for children, ages birth to five and their families.

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 200 Introduction to Early Childhood Education 3c-01-3cr

Prerequisite: Early childhood education/special education major or early childhood education major
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 215 The Developing Child: K-4th Grade 3c-01-3cr

Introduces the interrelationships among the various aspects of child development in grades K-4, its relevant theories and educational applications. Through literature review, critique of theories, observation, and large and small group activities, students learn child development principles and how they may be applied in K-4 educational settings to foster successful learning. (Offered as ELED 215 Child Development before 2015-16.)

ECED 220 Differentiating Literacy Instruction through Children's Literature 3c-01-3cr

A survey of children's literature for children from preschool through grade 4. Describes selection and evaluation criteria for choosing children's literature to differentiate literacy instruction. Emphasizes strategies for differentiating instruction to develop children's literacy skills and integrating children's literature throughout the early childhood curriculum. Stresses motivational approaches for encouraging children's engagement with and response to literature.

ECED 221 Literature for the Young Child and Adolescent 3c-01-3cr

Prerequisite: Early childhood education/special education 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

Prerequisite: Early childhood education/special education major or early childhood education 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 are explored from both a theoretical and practical perspective.

ECED 280 Maximizing Learning: Engaging All PreK to Grade 4 Learners 3c-01-3cr

Prerequisites: Early childhood education/special education major or early childhood education 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 310 Science, Health, and Safety for All PreK to Grade 4 Learners 3c-01-3cr

Prerequisites: Early childhood education/special education major or early childhood education 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: Early childhood education/special education major or early childhood education, 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: Early childhood education/special education major or early childhood education 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.

ECED 425 Methods of Teaching and Assessing

Language Arts: Pre-K to Grade 4 Learners

2.5c-01-2.5cr

Prerequisite: ECED 351

Emphasizes the art of communication as an interrelated process. The task of the early childhood teacher is to develop and integrate the language arts throughout the curriculum. Techniques for teaching and assessing developmentally-appropriate oral and written communication, spelling, handwriting, and vocabulary are presented. Special emphasis is given to developmental writing approaches. (Writing-intensive course)

ECED 451 Literacy for the Developing Reader:

Grades 2-4 Learners

3c-01-3cr

Prerequisites: Early childhood education/special education major or early childhood education 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, is interwoven to ensure a balanced approach to the most effective instructional practices.

ECED 499 Advocacy and Collaboration in Diverse

Families and Communities

3c-01-3cr

Provides students with understanding and skills in multicultural approaches to education that enable them to recognize and respect the diversities that all their students bring to school and to also become effective advocates as they collaborate successfully with diverse families and communities.

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 economics 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 143 Financial Wellness

3c-01-3cr

Theories and principles related to the physical, social, and emotional wellness aspects of individual money management. Information is focused on building a sound financial foundation as a college student and can be

applied throughout the life span to ensure future financial well-being. Successful completion fulfills the Liberal Studies Dimensions of Wellness requirement.

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

Introduces and develops the economic way of thinking as it applies to the sports industry. Topics covered include the organizational structure of the major American sports leagues (e.g., revenue sharing, salary restrictions, and competitive balance), labor issues in sports (e.g., free agency, reserve clause, unions, strikes, and discrimination), the legal relationship between sports and government (e.g., the relationship between antitrust law and sports), and the issue of sports and public finance (e.g., location and financing of sports franchises and public ownership of stadiums and arenas).

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 US 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 334 Managerial Economics

3c-01-3cr

Prerequisites: ECON 121, 122, MATH 121 or equivalent

Applications of economic theory using algebra, elementary statistics, and calculus to solve managerial optimization problems including problems of forecasting and risk.

ECON 335 Public Finance

3c-01-3cr

Prerequisites: ECON 121, 122 or instructor permission

Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact on economy.

ECON 338 Poverty in Africa

3c-01-3cr

Prerequisite: ECON 101 or 121 or 122

Examines African poverty as an economic as well as a social phenomenon. It investigates the many sided nature of poverty and the importance of going beyond generalizations about the poor, including the various causes of poverty in Africa. It stresses the powerful ill effects of a combination of sluggish past economic growth, widening income inequalities, and anti-poverty strategies implemented by many African nations.

ECON 339 Economic Development I	3c-01-3cr	ECON 372 Economics of Wages and Employment	3c-01-3cr
Prerequisites: ECON 121, 122 or instructor permission		Prerequisite: ECON 330 or instructor permission	
Introduces the following concepts: 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.	
ECON 343 Economic History of the United States	3c-01-3cr	ECON 421 Macroeconomic Analysis	3c-01-3cr
Prerequisite: ECON 101 or 121 or 122		Prerequisites: ECON 121, 122 or instructor permission	
Applications of economic theory and models of economic development to the main patterns of US postrevolutionary growth; emphasizes the history of economic development as a laboratory for testing economic hypotheses.		Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.	
ECON 345 International Trade	3c-01-3cr	ECON 422 Microeconomic Analysis	3c-01-3cr
Prerequisites: ECON 121, 122 or instructor permission		Prerequisites: ECON 121, 122, MATH 121 or equivalent	
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.		Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.	
ECON 346 International Finance	3c-01-3cr	ECON 456 Advanced Econometrics	3c-01-3cr
Prerequisites: ECON 121, 122 or instructor permission		Prerequisite: ECON 356 or equivalent 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.		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.	
ECON 356 Introduction to Econometrics	3c-01-3cr	ECON 462 Energy Economics	3c-01-3cr
Prerequisite: ECON 355 or its equivalent or instructor permission		Prerequisites: ECON 122 or equivalent and MATH 115 or 121 or equivalent	
An introduction to econometrics, including linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.		Focuses on a variety of energy-related topics from an economics perspective. Topics include energy demand and supply, market structure and energy pricing, renewable and nonrenewable sources of energy, environmental impacts of energy use, climate change, and energy policy.	
ECON 360 Health Economics	3c-01-3cr	ECON 480 Seminar	3c-01-3cr
Prerequisite: ECON 122		Prerequisite: Instructor permission	
Analyzes the market for healthcare: demand by individual consumers and supply by health workers and hospitals. Considers the problems of information, risk, and externalities in making health decisions and the role of insurance. Explores public health policies, both in a world and domestic context. Introduces economic methods for program/policy research: elasticity estimation, cost-benefit analysis, and supply-demand modeling.		A seminar in selected economic issues or problems.	
ECON 361 Environmental Economics	3c-01-3cr	ECON 481 Special Topics	var-1-3cr
Prerequisite: ECON 101 or 122		Prerequisite: Instructor permission	
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.		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 362 Global Poverty and Health	3c-01-3cr	ECON 483 Honors Thesis	var-1-6cr
Prerequisite: ECON 122		Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
Researches information related to global trends in health and poverty and examines theories related to the economic, social, and political forces behind these trends. Economically analyzes the barriers preventing greater access to and usage of health services in poor communities, such as asymmetric information, monopoly provision, and externalities. Critically examines health service provision from opposite economic spectrums: (1) as Global Public Goods and (2) as micro-programs targeting specific populations. Covers case studies of health initiatives in developing countries and their economic impacts.		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 365 Economics of Tourism	3c-01-3cr	ECON 493 Internship in Economics	var-2-12cr
Prerequisite: ECON 101 or 121 or 122; or instructor permission		Prerequisites: Economics major who has completed at least 12cr in economics and has at least a 2.5 GPA in the major and in all course work	
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.		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 on 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 economics majors.	
		ECSP: Early Childhood/Special Education College of Education and Communications	
		ECSP 112 Growth and Development: Typical and Atypical	3c-01-3cr
		Prerequisites: EDEX 110, 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.

ECSP 314 Creative Experiences and Play for All PreK to Grade 4 Learners 3c-01-3cr

Prerequisite: Early childhood education/special education major or early childhood education 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. How 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.

ECSP 340 Introduction to Classroom and Behavior Management 3c-01-3cr

Prerequisite: Early childhood education/special education 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 preK through grade 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: Early childhood education/special education 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 Communication Disorders, Special
Education, and Disability Services
College of Education and Communications**

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 PreK to Grade 8 3c-01-3cr

Prerequisite: Early childhood education/special education 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 and 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 understand-

ing and knowledge of individuals with sensory, behavioral, physical, cognitive, language, and learning disabilities. Acquaints students with history and legislative bases of special education.

EDEX 114 Atypical Development in Infants, Children, and Adolescents 3c-01-3cr

Prerequisites: PSYC 101, EDEX 111

Presents foundations of human growth from conception to age 21. Atypical development related to special needs is emphasized with regard to cognitive, physical, and social-emotional development. A foundation for the understanding of the needs of students with developmental disabilities ranging from early intervention to the end of their high school years.

EDEX 222 Methods of Teaching Language Arts to Secondary Students with Disabilities 2c-01-2cr

Prerequisites: EDEX 111, 3.0 GPA, secondary education major
Provides intensive methods for secondary learners with disabilities in literacy (reading, writing, and listening). Focuses on basic concepts of remedial literacy instruction and specially designed instruction for secondary-aged students with diverse needs. Reviews research in the field, including current issues, trends, practices, and services. Organized around critical areas of literacy instruction and study skills. Examines issues and practices related to students who are English language learners. A variety of instructional approaches (e.g., cooperative learning, simulations, role-playing) are used to facilitate the acquisition of new skills.

EDEX 223 Reading Methods and Strategies for Students with Disabilities 3c-01-3cr

Prerequisites: EDEX 103, 111, 113

Focuses on basic concepts of developmental reading instruction and specially designed instruction for students with diverse needs. Reviews research in the field, examines necessary assessment tools, and surveys current issues, trends, practices, and services. Examines issues and practices related to students who are English language learners. Facilitates the acquisition of new skills through a variety of instructional approaches (e.g., cooperative learning, simulations, role-playing).

EDEX 231 Methods of Teaching Content Area Subjects to Persons with Disabilities 3c-01-3cr

Prerequisite: EDEX 111

Presents various ways of assessing student knowledge and identifying and implementing evidence-based practices to increase the success of students with disabilities in social studies and science in K-12. Examines best practices for understanding and evaluating curricular demands, monitoring student progress, providing tiered supports, and appropriate accommodations for promoting and enhancing content-area learning.

EDEX 269 Identifying and Understanding Children with Academic and Social Learning Needs from Preschool through Adolescence 3c-01-3cr

Prerequisites: EDEX 110, early childhood education/special education majors only

Focuses on evidence-based practices for educating children with special needs for academic instruction and/or social and emotional learning. Reviews literature on characteristics of students with learning and behavior problems and summarizes research on academic interventions, classroom climate, social and emotional learning, and self-regulation strategies. Applies social and behavioral learning theories to management of academic and social instruction. A variety of instructional approaches (e.g., case studies, simulations) are used to facilitate acquisition of new knowledge and to apply the knowledge to educational settings.

EDEX 278 Identifying and Understanding Children with Significant Adaptive Behavior and Learning Needs from Birth through Adolescence 3c-01-3cr

Prerequisites: EDEX 110, early childhood education/special education majors only

Focuses on major theoretical principles and basic knowledge regarding the nature and characteristics of children with significant adaptive behavior and learning needs. Presents practical information and explores the positive potential of children with significant needs. Introduces the legal foundation

and federal regulations of IDEA that guide the assessment and instructional planning to include the Individual Family Service Plan (IFSP) and the Individualized Education Program (IEP). Examines information that is critical and generic to instruction in all domains and content areas.

EDEX 300 Education of Students with Disabilities in Inclusive Elementary Classrooms 2c-01-2cr

Prerequisites: Early childhood education/preK-grade 6 and elementary education 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 on 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 415 Preschool Education for Children with Disabilities 3c-01-3cr

Prerequisites: Disability services majors, special education minors, 2.75 GPA

Information on assessment, intervention strategies, curriculum, and prescriptive planning for preschool children with disabilities. For departmental majors who are specifically interested in early childhood special education,

as an elective for other interested students in related fields, and as a required course for disability services majors.

EDEX 424 Strategic Assessment and Instruction in Expository Texts 3c-01-3cr

Prerequisites: Early childhood education/special education majors, completion of Step 1 of the 3-Step Process

Focuses on methodologies used for assessing, designing, and implementing instruction in expository texts for students with reading and learning disabilities. Addresses the demands of educational environments in which teachers are expected to collaborate in providing direct services to students. Special consideration is given to the growth and development of collaborative practices. In addition, students are expected to collaborate with each other in planning, designing, adapting, and evaluating assessment and instructional activities for a range of content area expository texts.

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 Cognitive Disabilities 3c-01-3cr

Prerequisites: Successful completion of Step 1 of the 3-Step Process, early childhood education/special education, PreK-8/7-12 special education and reading specialist, secondary content/grades 7-12 special education certification majors or permission

Emphasizes methods designed to facilitate the development of an integrated, functional, and community-based curriculum that prepares individuals for integration in a wide variety of postschool environments. Particular attention is given to methods and interventions based on the principles of applied behavior analysis.

EDEX 440 Ethical and Professional Behavior 1c-01-1cr

Emphasizes ethical and professional behavior for educational professionals working with individuals with special needs. Focuses on responsible and ethical conduct as it relates to interaction with students and other professionals in direct service, instructional, and/or supervisory roles. Also addresses legal implications related to these roles.

EDEX 458 Transition Assessment and Planning 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

Prerequisites: Successful completion of Step 1 of the 3-Step Process and a dual major in disability services/sociology or a minor in special education 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

Prerequisites: Successful completion of Step 1 of the 3-Step Process and a dual major in disability services/sociology or a minor in special education. 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 that 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.

**EDHL: Education of Deaf and Hard-of-Hearing Persons
Department of Communication Disorders, Special
Education, and Disability Services
College of Education and Communications**

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 3c-01-3cr

Prerequisite: Deaf education or disability services major or Deaf studies minor or permission

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. Exploration of the history of ASL and cultural aspects within the deaf community.

EDHL 215 Intermediate American Sign Language 3c-01-3cr

Prerequisites: EDHL 115, 3.0 GPA required for deaf education majors, 2.8 GPA for Deaf studies 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 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 for birth through 12 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 317 Sign Language in Educational Settings 3c-01-3cr

Prerequisites: EDHL 215, deaf education major or permission

Focuses on the use of sign language in the schools. Includes the adaptation of American Sign Language to Manually Coded English and Signed English, basic principles of interpreting in an educational setting for future teachers of deaf and hard-of-hearing students, and pedagogical methods of including American Sign Language as a language of instruction for deaf students.

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

An 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

An 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. Includes the development of an Evaluation Report and Individualized Education Plan, including a communication plan, and regular and adaptive methods of instruction for the teaching of language arts, social studies, and science. 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. Multiple projects and teaching activities are involved.

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 417 Advanced American Sign Language 3c-01-3cr

Prerequisite: EDHL 215

A continuation of Intermediate American Sign Language (ASL). Focuses on vocabulary expansion, comprehension of signed information, and development of fluency in conveying a message in ASL. Emphasizes receptive ability as well as overall quality of expression. Additional cultural aspects of ASL are discussed.

EDHL 440 Professional Seminar: Preparing to Be a Teacher, Researcher, Diagnostician, and Student Advocate 2c-01-2cr

Prerequisites: Deaf education major, successful completion of Step 2 of the 3-Step Process, concurrent enrollment in student teaching EDUC 421, 441. Students learn the importance of engaging in continual professional development. The Code of Professional Practice and Conduct for Educators is

emphasized. Collaboration and correspondence with school and agency personnel, parents, and students are explored. While examining the theoretical and research-based practices for an educational setting, the students engage in informed advocacy efforts on behalf of children with normal hearing, those with hearing loss, and the profession.

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
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. (writing-intensive course)

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.

EDSP: Educational and School Psychology
Department of Educational and School Psychology
College of Education and Communications

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 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 378 Learning 3c-01-3cr

Prerequisite: EDSP 102
Explores learning theories and educational application in the classroom.

EDSP 468 Current Topics in Educational Psychology 3c-01-3cr

Prerequisite: EDSP 102
Enables students to participate in advanced study of current topics at the interface between issues in education and the theories that drive the field. Investigates topics as they apply to specific aspects of teaching and learning. Investigates current academic considerations with a variety of perspectives being integrated to prepare students for addressing the needs of students.

EDSP 476 Foundations of Behavior Analysis 3c-01-3cr

Prerequisite: EDSP 102 or instructor permission
Introduces behavior analysis through discussion of its philosophical assumptions, theoretical underpinnings, and basic concepts. (Offered as EDSP 376 before 2017-18.)

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 479 Interpreting and Critiquing Educational Research 3c-01-3cr

Prerequisite: EDSP 477 or instructor permission
Obtain knowledge and understanding of various designs, components, and principles used in educational research articles and develop application, analysis, synthesis, and evaluation skills which will allow the summarizing and critiquing of a variety of research articles.

EDSP 493 Educational Psychology Honors Internship 1cr

Prerequisites: EDSP 102 and admission to Honors Track
A 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 Communications or the Teacher Education Program may be considered if approved by the Honors Track director. May be repeated.

EDUC: Education
College of Education and Communications

EDUC 221 Seminar in Essential Skills in Peer Mentoring 1c-01-1cr

Focuses on the critical peer mentoring skills including leadership, professionalism, and interpersonal communication. Instructs students in comprehensive preparation for working one-on-one with mentees, while maintaining confidentiality and respecting appropriate boundaries in the relationship. Demonstrates mentoring skills and proper accountability in supervised field experiences.

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 250 Labyrinth Seminar 1c-01-1cr

Focuses on the communication, executive functioning, and inter/intrapersonal demands of college life. Designed to build the necessary skills to navigate the social and academic environment to succeed in the college experience. The seminar includes both teacher- and student-directed topics. This course can be repeated every semester that the student elects to participate in the Labyrinth Center.

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. May be repeated for students seeking dual certification.

- 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 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. (elementary education majors only)
- EDUC 440 Professional Seminar: Teacher as Leader and Researcher Grades 4-8** **2c-01-2cr**
Prerequisites: Middle-level education 4-8 major, concurrent enrollment in student teaching EDUC 421 and 441
 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 in grades 4-8. Examines the theoretical and research basis for classroom practices.
- 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 before 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, 324 and admission to Step 1 of the 3-Step Process
 A prerequisite to student teaching in English. Introduces current professional practices in the teaching of English and communications in secondary 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 Teacher Education Program
 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 grade of "C" or better
 A study of curricula, standards, methods, and techniques for teaching mathematics in the secondary schools.
- EDUC 461 Student Teaching** **6c-01-6cr**
Prerequisite: 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 471 Student Teaching** **6c-01-6cr**
Prerequisite: 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
 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 499 Multicultural/Multiethnic Education** **2c-01-2cr**
Prerequisite: One methods course must be taken before, 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.

ELR: Employment and Labor Relations
Department of Employment and Labor Relations
College of Health and Human Services

- ELR 314 Health Policy and Law** **3c-01-3cr**
 Focuses on understanding the evolution of healthcare policy, health law, and federal and state regulation of healthcare financing programs. Introduces healthcare policy making; critical health policy issues; legislative, regulatory, and legal challenges; and legislative and political processes that impact the healthcare delivery system in the United States. (Cross-listed as NURS 314.)
- ELR 480 Introduction to Negotiations and Conflict Resolution** **3c-01-3cr**
 Deals with negotiations and conflict resolution techniques. An introduction to current concepts and theories of negotiations and resolving conflict and their application generally to everyday issues. Prepares students to engage in these techniques in workplace issues such as collective bargaining, negotiating contracts and agreements internally as well as externally.

ENGL 100 Basic Writing 3c-0l-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 Composition I 3c-0l-3cr

Prerequisite: ENGL 100 where required by placement testing

A first-year writing course. Students use a variety of resources to create projects in a variety of writing genres. Resources for writing include but are not limited to memory, observation, critical reading and viewing, analysis, and reflection. Students use writing processes to draft, peer review, revise, and edit their projects.

ENGL 121 Humanities Literature 3c-0l-3cr

Prerequisite: ENGL 101

Introduces students to works of imaginative literature through a careful analysis of poetry, drama, and prose fiction (short story and/or novel) from a variety of periods and cultures, including texts by women and ethnic and racial minorities. Also offered as FNLG 121. ENGL/FNLG 121 may be used interchangeably for D/F repeats; may not be counted for duplicate credit.

ENGL 122 Introduction to English Studies 3c-0l-3cr

Prerequisites: English major/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 are considered, especially in the interpretation of literature. At the conclusion, students are able to critically analyze texts and demonstrate those skills in discussion and writing. Required of all English majors.

ENGL 202 Composition II 3c-0l-3cr

Prerequisites: ENGL 101 and sophomore standing

Serves as a bridge between Composition I and students’ professional writing. Develops rhetorical skills for informed inquiry. Also develops the following abilities: writing, critical reading, revising, citing and documenting, speaking and listening, and reflecting.

ENGL 203 Introduction to Language Studies 3c-0l-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-0l-3cr

Concentrates on the film as an artistic medium. Eight to 12 motion pictures are shown during semester and are analyzed in class discussions.

ENGL 210 British Literature to 1660 3c-0l-3cr

Prerequisites: ENGL 101, and 121 or 122

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 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 to 1660-1900 3c-0l-3cr

Prerequisites: ENGL 101, and 121 or 122

Surveys British literature from about 1660 to the beginning of the 20th century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, freestanding 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 works.

ENGL 212 American Literature: Beginnings to 1900 3c-0l-3cr

Prerequisites: ENGL 101, and 121 or 122

Provides an understanding of American literature from its beginning to about 1900. Concentrates primarily on 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-0l-3cr

Prerequisites: ENGL 101, and 121 or 122

A survey of major authors and works in British and American literature since 1900. Begins with the shift from Victorianism and late 19th-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-0l-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-0l-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-0l-3cr

Prerequisite: ENGL 101

Focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer.

ENGL 225 Introduction to Literature by Women 3c-0l-3cr

Prerequisites: ENGL 121 or 122 and 202

Major trends and motifs across genres (fiction, nonfiction, poetry, autobiography) that reflect themes and subjects of continuing interest to women writers. The intersection of genre with race, ethnicity, and social class is of particular significance.

ENGL 226 Survey of Global Literature Since 1900 3c-0l-3cr

Prerequisites: ENGL 101, and 121 or 122

Surveys 20th 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 227 Introduction to Legal Writing 3c-0l-3cr

Prerequisite: ENGL 202

Introduces legal research and writing. Students learn to prepare research memos, memoranda of law, legal briefs, court observation essays, and other legal documents. Other topics include legal terminology, audience analysis, and case study analysis.

ENGL 265 Law and Literature 3c-0l-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 308 Critical Theory 3c-0l-3cr

Prerequisite: 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.

ENGL 309 Dramaturgy	3c-01-3cr	ENGL 328 Introduction to Linguistics	3c-01-3cr
An introduction to the study and profession of dramaturgy. A study of the historical significance of the dramaturg through the reading of early and modern practitioners. An examination of a number of critical theories that students will use to contextualize play scripts under study. Performance of such dramaturgical tasks as identifying script references, historicizing social conventions and customs, comparing translations of notable foreign plays, preparing information packets for actors, directors, and design teams, drafting program notes, and organizing talkbacks. Opportunity to provide services for a department production. (Cross-listed as THTR 311.)		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 310 Public Speaking	3c-01-3cr	ENGL 329 The History of the English Language	1c-01-1cr
Prerequisite: ENGL 101		Prerequisite: ENGL 202	
Fundamental principles of public speaking, audience analysis, interest, and attention and selection and organization of speech material.		Studies historical development of the English language as a basis for a better understanding of modern American English.	
ENGL 313 Rhetorical Trends and Traditions	3c-01-3cr	ENGL 330 The Structure of English	3c-01-3cr
Prerequisite: ENGL 101		Prerequisite: ENGL 202	
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.		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 314 Speech and Communication in the Secondary English Classroom	3c-01-3cr	ENGL 332 Film Genres	3c-01-3cr
Prerequisites: ENGL 122, 202		Prerequisites: ENGL 101, 208	
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.		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 321 Persuasive Speech and Writing	3c-01-3cr	ENGL 333 Psycholinguistics	3c-01-3cr
Prerequisite: ENGL 202		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.		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 323 Teaching Literature and Reading in the Secondary School	3c-01-3cr	ENGL 335 Literary Nonfiction	3c-01-3cr
Prerequisites: ENGL 122, 202		Prerequisite: ENGL 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.		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 324 Teaching and Evaluating Writing	3c-01-3cr	ENGL 336 Language, Gender, and Society	3c-01-3cr
Prerequisites: ENGL 122, 202, English education major or permission		Prerequisites: ENGL 202, junior standing	
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.		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 325 Writing Poetry	3c-01-3cr	ENGL 337 Myth	3c-01-3cr
Prerequisite: ENGL 221 or instructor permission		Prerequisites: ENGL 202, and 121 or 122	
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.		Examines the nature and function of the mythic experience and explores the archetypal patterns of myths from various cultures.	
ENGL 326 Writing Fiction	3c-01-3cr	ENGL 340 The Novel	3c-01-3cr
Prerequisite: ENGL 221 or instructor permission		Prerequisites: ENGL 101, and 121 or 122	
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.		Focuses on the forms and theories of the novel as a genre. Emphasizes major writers and movements as well as significant historical developments.	
ENGL 327 Writing Creative Nonfiction	3c-01-3cr	ENGL 341 Poetry	3c-01-3cr
Prerequisite: ENGL 221 or instructor permission		Prerequisites: ENGL 101, and 121 or 122	
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.		Studies the forms and theories of poetry as a genre. Includes study of major writers, movements, and aesthetic developments.	

- ENGL 342 Short Fiction** **3c-01-3cr**
Prerequisites: ENGL 101, and 121 or 122
 Studies the form and theory of short fiction as a genre. Emphasizes major writers and movements as well as significant historical developments.
- ENGL 343 Drama** **3c-01-3cr**
Prerequisites: ENGL 101, and 121 or 122
 Focuses on the forms and theories of drama as a genre. Emphasizes major writers and movements as well as significant historical developments.
- ENGL 344 Ethnic American Literature** **3c-01-3cr**
Prerequisites: ENGL 101, and 121 or 122
 Concerned with ethnic US 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 111 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/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 19th- and 20th-century African American literature (poetry, fiction, nonfiction), including 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 202, and 121 or 122
 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 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 readings are by “literary women,” course also may consider works by women who are professionals in nonliterary disciplines.
- ENGL 386 Regional Literature in English** **3c-01-3cr**
Prerequisites: ENGL 202, and 121 or 122
 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 BA English majors: ENGL 213
 An introduction to Irish literature since 1800, with particular emphasis on the Literary Revival in the early 20th 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 396 The Literature of Emerging Nations** **3c-01-3cr**
Prerequisite: 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 415 English Language Studies for Teachers** **3c-01-3cr**
Prerequisite: ENGL 202
 Focuses on the fundamentals of language study with equal emphasis on the sound, the word, the sentence, the meaning, and the discourse patterns of English as they manifest in daily lives. Educationally relevant topics, such as applications of sociolinguistics 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.
- ENGL 418 Young Adult Literature** **3c-01-3cr**
Prerequisites: ENGL 101, 122, 323, or permission, English education major
 Introduces literature for and about young adults. Emphasizes critical study of the literature and its classification as well as resources and rationales for using young adult literature in the middle and secondary classroom. Explores selection of literature and various methods of literature instruction. (Offered as ENGL 318 before 2014-15.)
- 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 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 426 ESL Methods and Materials	3c-01-3cr	ENGL 482 Independent Study	var-1-6cr
Prerequisite: Senior standing or instructor permission		Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
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.		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 430 Major British Author	3c-01-3cr	ENGL 483 Honors Thesis	var-1-6cr
Prerequisites: ENGL 122, 202; and one of 210-213 or 226		Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
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.		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.	
ENGL 434 Shakespeare	3c-01-3cr	ENGL 484 Topics in English Studies	3c-01-3cr
Prerequisites: ENGL 122, 202, and one of 210-213 or 226		Prerequisites: Declared English major; ENGL 122, 202; minimum 24cr in major	
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy.		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 track: Literary/Textual/Cultural, Writing, Film, or Language Studies. Students are part of a community of learners and reflect on 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, to assess their growth and potential as readers, writers, and critical thinkers.	
ENGL 436 Major American Authors	3c-01-3cr	ENGL 485 Honors English Portfolio/H	1c-01-1cr
Prerequisites: ENGL 122, 202; and one of 210-213 or 226		Prerequisites: Declared English major; must be enrolled in English Honors Track; must be enrolled in ENGL 484	
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.		As one of the requirements for achieving English Honors, students construct an Honors version of the summative portfolio required of all BA majors. Complements the objectives and semester topic of the section of ENGL 484 in which the student is concurrently enrolled.	
ENGL 440 Major Figures in Film	3c-01-3cr	ENGL 493 Internship	var-3-12cr
Prerequisites: ENGL 121 or 122; and 202, 208		On-the-job training opportunities in related areas. Application and acceptance to internship program required.	
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.			
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.			
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 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 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.			

ENVE: Environmental Engineering
Department of Physics
College of Natural Sciences and Mathematics

ENVE 101 Introduction to Environmental Engineering	3c-01-3cr
Introduces the principles of environmental engineering with specific focus on water pollution and control, hazardous substances and risk assessment, water and wastewater treatment systems, air-pollution and emission control, solid wastes, and global warming.	
ENVE 201 Fluid Mechanics	3c-01-3cr
Prerequisites: ENVE 101, MATH 125, PHYS 131	
Applies basic laws of fluid mechanics with applications to engineering problems, hydrostatic pressure, buoyancy, open systems and control volume analysis, mass conservation and momentum conservation for moving fluids, viscous fluid flows, flow through pipes, and dimensional analysis.	
ENVE 211 Statics and Solid Mechanics	3c-01-3cr
Prerequisites: ENVE 101, MATH 125, PHYS 131	
Examines principles of mechanics, force systems, equilibrium structures, distributed forces, centroids, stress and strain, torsion, bending of beams, shearing stress in beams, combined stresses, principal stresses, deflections of beams, and statically indeterminate members and columns.	
ENVE 301 Environmental Aquatic Chemistry	3c-3l-4cr
Prerequisites: ENVE 101, CHEM 112 or 114	
Examines fundamental principles of general, analytical, physical, and equilibrium chemistry applicable to water and wastewater treatment systems. Topics include thermodynamics and kinetics of acids and base reactions, carbonate chemistry (alkalinity), air-water exchange, precipitation and dissolution, oxidation-reduction, and chemical analysis of water and wastewater in a laboratory.	

ENVE 311 Water Resources Engineering 3c-3l-4cr**Prerequisite:** ENVE 201

Explores hydrologic engineering, including fundamentals of hydrology, rainfall-runoff modeling, hydraulic processes (including both pressurized pipe flow and open channel flow), and hydrologic frequency analysis. These fundamentals are then applied in the computation of design flows and in the analysis and design of hydraulic systems such as pipe networks and storm water management systems.

ENVE 461 Water and Wastewater Treatment 3c-0l-3cr**Prerequisites:** BIOL 202, ENVE 301

An overview of engineering approaches to protecting water quality with an emphasis on fundamental principles. Explores design of systems for treating municipal wastewater and drinking water as well as physical, chemical, and biological processes, including sedimentation, filtration, biological treatment, disinfection, and sludge processing.

ENVE 471 Solid and Hazardous Waste Management 3c-0l-3cr**Prerequisites:** BIOL 202, ENVE 311

Examines the principles of integrated solid waste management. An overview of municipal solid waste (MSW), industrial waste and hazardous waste management, including design and economic analysis. Explores the planning and engineering principles needed to address the growing and increasingly intricate problem of controlling and processing the refuse (solid waste) created by urban societies. Discusses options such as landfilling, composting and incineration from engineering, social, and regulatory perspectives. Reviews physical, chemical, and biological treatment of hazardous waste. Covers federal regulations, permitting and public participation processes and innovative management practices associated with solid and hazardous waste.

ENVE 498 Environmental Engineering 3c-0l-3cr

Prerequisite: Senior standing (90 or more credits) or instructor permission
Capstone design experience involving an interdisciplinary environmental engineering project incorporating real-world clients. Includes visits and tours of field sites as well as interaction with professional engineers. Focuses on water treatment alternatives, regulatory operational needs, sustainability; and implementation of a realistic schedule and project budget.

FCSE: Family and Consumer Sciences Education
Department of Human Development, Fashion, and Interior Design
College of Health and Human Services

FCSE 101 Personal and Family Management 3c-0l-3cr

Personal and family management as a system and its relationship to the global environment, individuals, and families. Formulation of goals, values, and standards; use of decision-making process; sustainability and utilization of resources.

FCSE 143 Financial Wellness 3c-0l-3cr

Theories and principles related to the physical, social, and emotional wellness aspects of individual money management. Information is focused on building a sound financial foundation as a college student and can be applied throughout the life span to ensure future financial well-being. Successful completion fulfills the Liberal Studies Dimensions of Wellness requirement. This course is cross-listed with ECON/FIN 143. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

FCSE 312 Housing and Culture 3c-0l-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.

FCSE 315 Consumer Economics and Family Finance 3c-0l-3cr

Applies economic, sociological, and psychological principles to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

FCSE 350 Teaching Family Life Education 3c-0l-3cr

Prerequisite: Family and consumer sciences education, child development and family relations, and disability services majors, or instructor permission
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 is emphasized. A microcomputer spreadsheet is utilized to manage a department budget and a grade book. Participation in professional organization activities is expected.

FCSE 413 Problems in Consumer Economics 3c-0l-3cr**Prerequisite:** FCSE 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 that aid the consumer are reviewed. Individual investigations required.

FCSE 416 Problems in Family Finance 3c-0l-3cr**Prerequisite:** FCSE 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.

FCSE 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.

FCSE 450 Teaching Vocational and Family Consumer Science Education 3c-0l-3cr**Prerequisite:** FCSE 350

Emphasizes teaching vocational family and consumer sciences in consumer/homemaking and occupational family and consumer sciences programs. Federal legislation affecting 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.

FDED: Foundations of Education
Department of Professional Studies in Education
College of Education and Communications

FDED 440 Orientation to Teaching in Urban Centers 2c-0l-2cr

Provides an understanding of urban learners and their unique learning needs and conditions. Emphasizes understanding the origin of attitudes and values and how these affect the relationships that exist between students and teachers. Special attention given to practical application of theoretical information to problems of urban education.

FDED 441 Field Experiences in Urban Education 3c-0l-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 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.

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 Current Issues in Nutrition and Wellness 3c-01-3cr

Introduces contemporary nutrition issues as they relate to personal food choices and overall health. Completion of FDNT 143 fulfills the Liberal Studies Dimensions of Wellness requirement. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

FDNT 145 Personal Nutrition 3c-01-3cr

Encourages students to practice and adopt food behavioral choices that can be applied to everyday life. Evidence-based information concerning weight control, nutrients, diseases, and lifecycle nutrition is presented. Appropriate for students who are not nutrition majors or minors. (Titled Introduction to Nutrition before 2014-15.)

FDNT 150 Foods 3c-01-3cr

Prerequisites: Grade of "C" or better 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 better
A detailed study of nutrition during all stages of the human life cycle; current issues and research as they impact 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-6l-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 355 Medical Nutrition Therapy I 3c-01-3cr

Prerequisites: FDNT 212 with a grade of "C" or better 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.

FDNT 362 Experimental Foods 2c-3l-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 better
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 415 Sustainable Nutrition 3c-01-3cr

Explores food system sustainability issues from farm to fork, including food production, preparation, processing, packaging, and distribution. Assesses the sustainability of current dietary recommendations and the environmental impact of food choices. Evaluates food security from a national and global perspective.

FDNT 422 Public Health Nutrition and Epidemiology 3c-01-3cr

Prerequisites: FDNT 145 or 212 and MATH 214 or 216 or 217, or department permission
Identifies population-based needs and approaches for prevention and alleviation of diet-related conditions. Explores methodological issues involved in the design, conduct, analysis, and interpretation of studies investigating the relationship between nutritional status, diet, and disease. Examines the application of nutrition research related to nutrition assessment and program and policy design and evaluation to improve the nutritional status and health of diverse population groups.

FDNT 430 Professional Topics in Food and Nutrition 3c-01-3cr

Prerequisites: FDNT 355, 364, HOPS 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 455 Medical Nutrition Therapy II 3c-01-3cr

Prerequisite: FDNT 355 with a grade of "C" or better
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.

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 MS degree in FDNT requirements.)

FDNT 463 Nutrition Counseling 2c-3l-3cr

Prerequisites: FDNT 355, PSYC 101, FDNT 455 or concurrently
Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (three hours per week) counseling clientele in normal and therapeutic nutrition.

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 471 Integrative Nutrition in Complementary and Alternative Healthcare 3c-01-3cr

Prerequisites: FDNT 145, 212 or departmental permission
Explores the foundation of complementary, alternative, integrative, and functional nutrition theories and practices. Differentiates among traditional, complementary, alternative, integrative, and functional nutrition models as related to food, supplements, herbs, and disease. Evaluates current research related to complementary, alternative, integrative, and functional nutrition.

FDNT 482 Independent Study var-1-6cr

Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost; 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-3-12cr

Prerequisite: Must have earned 60cr
An opportunity to work away from the university in supervised situations at healthcare facilities, foodservice, community, or nonprofit organizations. Students receive career-related experiences. Must meet university internship requirements.

Note: White uniforms, including white shoes, are required for all lab courses in which food is prepared. Students must meet the professional dress requirements of the department.

FIAR: Fine Arts
College of Fine Arts

FIAR 101 Introduction to Fine Arts 3c-01-3cr

An exploration of visual art, theater, and music, examining their conceptual and aesthetic underpinnings, selected works, and their primary and similar functions in the expression of cultural, political, and personal views of the world around us. Class experience includes the analysis of at least one major work of each form, attending at least two live performances, viewing of selected works, and creative activities. If it should be necessary for a student who fails this course to take a D/F repeat, any one of the following courses may be substituted: ARHI 101, MUHI 101, THTR 101, DANC 102.

FIAR 401 Creativity and Innovation in the Arts 3c-01-3cr

Focuses on contemporary big ideas in the arts, the connections between the arts, and the place of the arts in broader society and in further cultivating innovative thinking in the arts community. Promotes student development of new ideas into viable potential directions for their future professional lives.

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 143 Financial Wellness 3c-01-3cr

Theories and principles related to the physical, mental, social and emotional wellness aspects of individual money management. Information is focused on building a sound financial foundation as a college student and can be applied throughout the life span to ensure future financial well-being. Successful completion fulfills the Liberal Studies Dimensions of Wellness requirement. Cross-listed with ECON/. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

FIN 310 Fundamentals of Finance 3c-01-3cr

Prerequisites for business majors: ACCT 202, MATH 214
Prerequisites for nonbusiness majors: 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.

FIN 315 Financial Analysis Using Electronic Spreadsheets 3c-01-3cr

Prerequisite: 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.

FIN 320 Corporate Finance 3c-01-3cr

Prerequisite: Grade of "C" or better in 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 FIN 310, 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.

FIN 324 Principles of Investments 3c-01-3cr

Prerequisite: 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.

FIN 360 Insurance and Risk Management 3c-01-3cr

Prerequisite: FIN 310
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.

FIN 365 Student Managed Investment Portfolio I—Valuation 1.5c-01-1.5cr

Prerequisite: Finance and accounting majors or instructor permission
Applies empirical and theoretical concepts to real-world portfolio management and investment decisions. Different investment strategies and valuation models are used to reinforce investment principles and practices learned in previous finance courses.

FIN 366 Student Managed Investment Portfolio II—Performance 1.5c-01-1.5cr

Prerequisite: FIN 365
Students assess the performance of a stock portfolio managed by their peers. Performance measures focus on risk and return and include financial ratio analysis and benchmark comparisons.

FIN 401 Energy Finance 3c-01-3cr

Prerequisite: FIN 310 or equivalent/permission
Presents a strategic framework for examining energy finance strategies used primarily in the oil and gas industry. Discusses the wide range of tools available for financing energy projects such as equity, debt, tax credits, and other methods used by corporations. Extends the financing framework by describing current theories and applications in developing the energy product and how it is priced and delivered to the end user.

FIN 410 Financial Institutions and Markets 3c-01-3cr

Prerequisite: 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.

FIN 420 Investment Analysis **3c-01-3cr****Prerequisites:** 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.

FIN 422 Seminar in Finance **3c-01-3cr****Prerequisites:** FIN 320, 324, seniors only

Primarily for the senior finance major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.

FIN 424 International Financial Management **3c-01-3cr****Prerequisite:** 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 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.

FIN 425 Financial Derivatives **3c-01-3cr****Prerequisites:** FIN 320 and 324 or equivalent/permission for FIN 425 and 324 or equivalent/permission for FIN 525

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.

FIN 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 offered primarily for upper-level undergraduate students.

FIN 482 Independent Study **var-3cr****Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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.

FIN 493 Finance Internship **var-3-12cr****Prerequisites:** 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 finance major area elective requirements. Additional internship credits must be used as business electives only.

FNLG: Study Abroad and Comparative Literature**Department of Foreign Languages****College of Humanities and Social Sciences****FNLG 121 Humanities Literature** **3c-01-3cr****Prerequisite:** ENGL 101

Introduces students to works of imaginative literature through a careful analysis of poetry, drama, and prose fiction (short story and/or novel) from a variety of periods and cultures, including texts by women and ethnic and racial minorities. Also offered as ENGL 121. ENGL/FNLG 121 may be used interchangeably for D/F repeats; may not be counted for duplicate credit.

FNLG 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 ENGL 391.

FNLG 395 Selected Writers from 20th-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 20th-century literature. Also listed as ENGL 395.

FRNC: French**Department of Foreign Languages****College of Humanities and Social Sciences****FRNC 101 Basic French I** **4c-01-4cr****Prerequisite:** Appropriate score on the placement test (WebCAPE score between 0 and 285)

For beginning students. Not open to native speakers, except by special permission of department. Students must achieve an appropriate placement test score to enroll (score between 0 and 285). 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. Attendance is mandatory. May not register for, or take a D/F repeat in, FRNC 101 when credit has already been received for a higher-numbered French course.

FRNC 102 Basic French II **4c-01-4cr****Prerequisite:** FRNC 101, or qualifying score on the WebCAPE placement test (286-362), or instructor permission

For beginning students. Students must achieve an appropriate placement test score to enroll (score between 286 and 362). 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. Attendance is mandatory. May not register for, or take a D/F repeat in, FRNC 102 when credit has already been received for a higher-numbered French course.

FRNC 201 Intermediate French **4c-01-4cr****Prerequisite:** FRNC 102, or qualifying score on the WebCAPE placement test (score above 362), or instructor permission

Continued study of French; development of listening, reading, speaking, and writing, but primary emphasis is on aural/oral skills. Students use a multimedia environment to learn to converse and ask questions in the past. 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; students review how to narrate and describe in the past, ask and give directions, talk about the future, avoid repetitions, 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. Attendance is mandatory. May not register for, or take a D/F repeat in, FRNC 201 when credit has already been received for a higher-numbered French course. Liberal Studies Humanities credit is given for this course.

FRNC 220 Intermediate French Conversation **3c-01-3cr****Prerequisite:** FRNC 201, or qualifying score on the WebCAPE placement test (score above 402), or instructor permission

Intensive work on communication skills with specific emphasis on spontaneous interpersonal speaking, discourse strategies, vocabulary building, and pronunciation. Required for all minors. Students may not register for, or take a D/F repeat in, FRNC 220 when credit has already been received for a higher-numbered French course.

FRNC 230 Intermediate French Composition and Grammar 3c-01-3cr

Prerequisite: FRNC 220 or equivalent; may be taken concurrently
Intensive practice in written expression and communication in French together with a grammar review. Intermediate-level language course with the goal of fostering writing in French for a variety of practical purposes. Review and expansion of specific grammar points are integrated into each unit. Taught in French.

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 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 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 441 Advanced French Grammar 3c-01-3cr

Prerequisite: FRNC 341
Builds on 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 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 Office of the Provost
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. 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 Office of the Provost
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.

FSMR: Fashion Merchandising
Department of Human Development, Fashion, and Interior Design
College of Health and Human Services

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 158 Fashion Show Production 3c-01-3cr

Focuses on developing a practical understanding of fashion through image, language, and events. All aspects of production and management of fashion shows are addressed, including the importance of teamwork. (Offered as FSMR 358 before 2016-17.)

FSMR 180 Introduction to Fashion 3c-01-3cr

A survey of fashion careers and industry functions including design, production, retail channels, and current trends.

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 215 Textiles 3c-01-3cr

Prerequisite: Sophomore standing
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. (Offered as FSMR 314 before 2016-17.)

FSMR 252 Aesthetics of Fashion 3c-01-3cr

The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation.

FSMR 258 Fashion Brand Merchandising 3c-01-3cr

Focuses on contemporary concepts, phrases, branding terms, and theoretical frameworks for most fashion brand-relative activities. Applies concepts about the role of branding in fashion through projects, such as case studies, exercises, shadowing activities, and developing their own fashion brand.

FSMR 262 Fashion Forecasting 3c-01-3cr

Prerequisite: FSMR 180
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 280 Introduction to Apparel Buying 3c-01-3cr

Prerequisites: FSMR 180 with a grade of "C" or better and ACCT 201
Focuses on using mathematical concepts in merchandising applications used for apparel buying. Students develop and determine assortment plans, cost of merchandise, profitability, and retail sale prices.

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

Prerequisite: Junior standing
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 357 Global Issues in Textiles and Apparel 3c-01-3cr**Prerequisite:** Junior standing

The study of the global textiles and apparel industry with emphasis on the US textile complex and the US market within an international context.

FSMR 380 Applications in Apparel Buying 3c-01-3cr**Prerequisite:** FSMR 280 with grade of “C” or better

Focuses on the development of a six-month stock and sales plan for a retail business using computer applications. Includes projecting retail sales, controlling inventory, calculating the amount of merchandise to purchase, determining markup percentages, and effectively using markdowns to manage inventory.

FSMR 385 Ready-to-Wear Analysis 1c-3I-3cr**Prerequisite:** FSMR 112

An examination and evaluation of the quality of ready-to-wear apparel through construction, style, fit, marketability, and price.

FSMR 434 Quality Control in Textiles 1c-3I-3cr**Prerequisite:** FSMR 215

Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis.

FSMR 456 Historic Costume 3c-01-3cr**Prerequisite:** Junior standing

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 on the design of clothing worn.

FSMR 468 Supply Chain Management in Textiles and Apparel 3c-01-3cr**Prerequisite:** Junior standing or above

Examines supply chain management for textile and apparel products through the network of suppliers, manufacturers, distributors, retailers, and customers. Emphasis is placed on the dynamic nature of supply chain management in the global textile and apparel industry and the interrelationships among the segments of the textile-apparel-retail complex.

FSMR 480 Professional Development in the Fashion Industry 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 course work, with emphasis on 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 Office of the Provost

Particular consumer considerations are independently investigated in the areas 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 five hours per credit.

FSMR 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. (Offered as CNSV 493 before 2016-17.)

GEOG: Geography

Department of Geography and Regional Planning

College of Humanities and Social Sciences

GEOG 101 Geography of Human Environment Interaction 3c-01-3cr

The physical environment is modified by human activities, largely as a consequence of the ways in which societies value and use earth’s natural resources, but human activities and distributions are, in turn, influenced by earth’s physical features and processes. These themes are addressed by examining the geography of environmental impacts such as tropical deforestation, global climate change, energy development, urban growth, and agricultural land use. Also considered are natural hazards such as hurricanes, earthquakes, volcanic eruptions, and flooding.

GEOG 102 Geography of United States and Canada 3c-01-3cr

A conceptually based introductory-level geography course that focuses on the American landscape. Includes mapping culture regions; tracing settlement patterns; resource use; environmental perceptions; the interplay of urbanization, industrialization, postindustrialization, and spatial mobility; the occurrence of economically disadvantaged landscapes; and the role individuals and society have in the creation of the graphic landscape.

GEOG 104 World Geography: Global Context 3c-01-3cr

Relates theories of the discipline of geography to current world issues and global patterns. Emphasizes local versus global strategies of resource management, spatial legacies of colonialism, contemporary multiscale issues with workforce migration, urban structure, disease, and globalization. Focuses on global patterns of development through comparative approaches and understanding of human and physical geographic characteristics of world regions.

GEOG 105 Our Digital Earth: Mobile Devices, Web Applications, and Geospatial Technology 3c-01-3cr

An overview of evolving geographically-enabled (geospatial) technologies and applications, and explores the wide-ranging impacts of geospatial technology on human decision-making, perceptions, and society. Covers location-based services, including personal navigation, global positioning systems (GPS), web-based mapping services, and social networks with real-time location information commonly found on personal mobile devices such as phones, tablets, and personal computers. Explores the technologies and societal implications of our digital planet with particular focus on the geospatial technologies that make geographically-enabled mobile and web applications possible.

GEOG 109 Geographic Information Science and Systems for Energy Applications 3c-01-3cr

Provides students with knowledge of the theoretical basis of Geographic Information Systems (GIS) and geospatial technologies and their application for the energy sectors. Covers the specifics of selected GIS and database software packages. Develops skills to conceptualize energy-related GIS applications, use GIS software packages, manipulate and query geographic data to solve problems, perform simple spatial analysis, and understand how to utilize GIS for energy-related analyses.

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 230 Cultural Geography 3c-01-3cr

Introduces cultural geography, including folk and popular culture, religion, language, ethnicity and race, population, agriculture, urban and political geography, human relationships with the natural environment, culture regions, cultural diffusion, cultural interaction, globalization, and cultural landscapes.

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. Emphasizes a global perspective using a combination of theoretical and empirical concepts.

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 253 Geography of Europe 3c-01-3cr
A critical analysis and understanding of historic factors that led to the creation of the European Union. Critically examines current and future economic and political challenges that face the European Union. A survey of the human geography and physical resources of contemporary Europe in historical and global context. Covers a broad range of topics, including Europe, in historic perspective, physical geography, human-environment interactions, population dynamics, culture and change, economic and agricultural development, urbanization and migration, and political geography.

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 21st century.

GEOG 255 Geography of Africa 3c-01-3cr
A critical geographic analysis and understanding of Africa, and the continent's level of development against the background of traditional misconceptions about the region. Offers a survey of the human geography and physical resources of contemporary Africa in a historical and global context. Covers a broad range of topics, including Africa, in historical perspective, physical geography, human-environment interactions, population dynamics, culture and change, economic and agricultural development, urbanization and migration, and political geography.

GEOG 256 Geography of East and Southeast Asia 3c-01-3cr
A critical geographic analysis and understanding of East and Southeast Asia including its natural environment, human landscapes, and historical geography, and how these aspects of place interact with each other in space. Examines East and Southeast Asia at multiple scales by providing a comprehensive analysis of spatial patterns within the region, across the region as a whole, and by considering how East and Southeast Asia interface with a globalizing planet. Explains the political and economic evolution of this region from the period of global colonialism, through the rise and fall of Marxist ideology to its current position as the emergent Asian Pacific Rim. Covers a broad range of topics, including: historical geography; physical geography; human-environment interactions; population dynamics; cultural geography; economic and agricultural development; urbanization and migration; and political geography. (Titled Geography of East Asia before 2014-15.)

GEOG 257 Geography of South and Southwest Asia 3c-01-3cr
A geographical exploration and analysis of South and Southwest Asia. A survey overview of the complex physical and human geographies of the region, including demographic transition, gender inequalities, issues of development in the postcolonial global era, religious diversity, the Israeli-Palestinian conflict, US foreign policy toward the region, the exploitation of resources (particularly oil), terrorism, and the rise of radical Islamist movements. (Titled Geography of South and Southeast Asia before to 2014-15.)

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 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
Presents automated methods for creating, maintaining, and analyzing spatial data. Includes (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 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 course from GEOG 341, 342, BIOL 103, 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 404 Transportation Planning 3c-01-3cr

Prerequisite: GEOG/RGPL 333 or RGPL 350 or one course from the Economic Geographer Concentration
Introduces the major themes and methods of transportation planning, particularly in an urban context. It is project oriented and supported by readings from the scholarly literature covering themes such as modes of transit, land use implications, and commercial development. Reading assignments are organized topically and coordinated with two workbook projects that develop applied skills. Topics include theory, empirical description, and methodological practice. (Also offered as RGPL 404; may not be taken for duplicate credit.)

GEOG 409 Spatial Analysis Applications in the Energy Sectors Workshop 3c-01-3cr

Prerequisite: GEOG 109
Characterizes the spatial representation and analysis techniques used by public, private, and nonprofit entities engaged in the energy industries. Focuses in particular on the implementation of energy resource applications including exploration and development, environmental and cultural compliance, logistics, production analysis, and infrastructure maintenance.

GEOG 411 History of Geography 3c-01-3cr

Prerequisites: GEOG 230 and at least 9 other GEOG credits
Deals with history of the discipline, great ideas, major scholars, leading problems, and unresolved issues.

GEOG 412 Research Seminar 3c-01-3cr

Prerequisite: GEOG 411
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.)

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 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 420 Technical Issues in Geographic Information Systems 3c-01-3cr

Prerequisite: GEOG 316 or 419
Uses project-based approach to develop and maintain a geographic information system (GIS). Designs and implements functional systems through cooperative learning. Covers methods for designing GIS to user specification, data collection, data input, project management, and system documentation. (Also offered as RGPL 420; may not be taken for duplicate credit.) (Offered as GEOG 417 before 2016-17.)

GEOG 421 Enterprise GIS Management 3c-01-3cr

Prerequisite: GEOG 420 or instructor permission
Principles and methods for creating, operating, maintaining, and managing data for multiuser geospatial information systems are studied. Each student will customize, document, and operate a multiuser 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

Prerequisite: 60cr completed or instructor permission
Provides knowledge of the theoretical basis and practical applications of global 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 435 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, environmental impacts, and economic development. Specific 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 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 444 Energy Development and Compliance I 3c-01-3cr

Prerequisite: GEOG 435 or instructor permission
Reviews and characterizes energy resources found in northern Appalachia and the logic and techniques used to identify, quantify, and regulate their development and extraction. Focuses in particular on the spatial dimensions of shale gas, coal, and wind as major energy sources in northern Appalachia and deals with topics such as exploration, environmental and cultural compliance, logistics, production analysis, and infrastructure maintenance.

GEOG 445 Energy Development and Compliance II 3c-01-3cr

Prerequisites: GEOG 316, 335, 444; or instructor permission
Reviews and characterizes the spatial representation and analysis techniques used by public, private, and nonprofit entities engaged in the energy industries. Focuses in particular on the implementation of energy resource applications such as exploration and development, environmental and cultural compliance, logistics, production analysis, and infrastructure maintenance.

GEOG 462 Planning Policy, Implementation, and Administration 3c-01-3cr

Prerequisite: RGPL 350
Focuses on the planning and implementation of policies to manage the location, timing, type, and intensity of land development. Explores the multi-step process from community plan to project completion. Exposes students to the public environment in which community plans are developed and implemented and walks them through the real-world problems of identifying projects, building agency and interagency consensus, finding funding, putting together a project plan, project management, personnel, and budget to project completion. (Also offered as RGPL 462; may not be taken for duplicate credit.)

GEOG 464 Land Use Policy 3c-01-3cr

An introduction and 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.

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 Office of the Provost
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 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 predominantly 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 geoscience 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 geoscience majors/minors
Corequisite: Enrollment in GEOS 102 requires corequisite or previous enrollment in GEOS 101
Introduces the techniques geologists use to study the earth and reconstruct its past. Labs cover minerals, rocks, map interpretation, and fossil identification and may include field trips during the scheduled lab period.

GEOG 103 Oceans and Atmospheres **3c-01-3cr**
Prerequisite: No geoscience 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 geoscience majors/minors
Corequisite: Enrollment in GEOS 104 requires corequisite or previous enrollment in 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 geoscience 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.

GEOS 106 Exploring the Universe Lab **0c-21-1cr**
Prerequisite: No geoscience majors/minors
Corequisite: Enrollment in GEOS 106 requires corequisite or previous enrollment in GEOS 105
Introduces the techniques astronomers use to study the nature and motions of objects in the sky, including the sun, moon, planets, and stars. Includes two observations held at night.

GEOS 119 Geology of Energy Resources **3c-01-3cr**
Examines the geological environments that create energy resources. Compares patterns of energy development globally and nationally with particular emphasis placed on the development of Pennsylvania's energy resources. Studies relationships of environmental impacts to current levels of energy use, both in terms of climate and water. Culminates with a look at factors that affect future energy demand in terms of population growth and standard of living.

GEOS 150 Geology of National Parks **3c-01-3cr**
Prerequisite: No geoscience 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.

GEOS 151 The Age of Dinosaurs **3c-01-3cr**
Prerequisite: No geoscience 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 fauna and flora), and extinction (asteroid impact, volcanism, climate change).

GEOS 152 Physical Resources of the Earth **3c-01-3cr**
Prerequisite: No geoscience 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.

GEOS 154 Human Exploration of Space **3c-01-3cr**
Prerequisite: No geoscience 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.

GEOS 201 Foundations of Geology **3c-31-4cr**
Prerequisite: Geoscience majors/minors, social studies education majors/minors, anthropology, geography, and regional planning 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 will 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: Geoscience or earth and space science education 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-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 201
 Introduces students to the geological processes that shape the earth’s surface, from uplift and erosion of mountains to the transport of sediment and subsequent formation of sedimentary rocks. Focuses 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 204 Historical Geology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 201
 An introduction to the historical development of geology as a scientific discipline and an overview of the methods used by geologists to reconstruct the Earth’s past history. Studies the rock and fossil record in lecture, lab, and field outcrops to discover how our planet formed, how plate tectonic activity shaped ocean basins and continents, how geologic processes created economic resources, and how the history of life is recorded by ancient rock deposits. Includes required field trips on weekends. (Offered as GEOS 351 before 2015-16.)
- GEOS 301 Mineralogy** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 201
 An introduction to crystallography, crystal chemistry, physical properties, optical properties, and phase equilibria of minerals pertinent to geology and economic resources. Laboratory exercises focus on mineral identification and interpretation as well as analytical techniques such as x-ray diffractometry and optical microscopy
- GEOS 302 Structural Geology** **3c-3l-4cr**
Prerequisites: Grades 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 that may occur on weekends.
- GEOS 303 Field Geology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 201
 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 that may occur on weekends.
- GEOS 310 Environmental Geology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 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 that may occur on weekends.
- GEOS 311 Geochemistry** **3c-3l-4cr**
Prerequisites: CHEM 111, MATH 121, grade of “C” or better in GEOS 201
 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.
- GEOS 312 Hydrogeology** **3c-3l-4cr**
Prerequisites: Grades of “C” or better in GEOS 201 and 202; MATH 121 or 125 or instructor permission.
 An overview of groundwater geology, including flow equations, aquifer flow equation, aquifer parameter testing, groundwater sampling techniques, and remediation of groundwater pollution. Labs emphasize graphical and analytical solutions as well as computer modeling of groundwater flow systems.
- GEOS 323 Geophysics** **3c-3l-4cr**
Prerequisites: PHYS 111, MATH 121, grade of “C” or better in GEOS 201
 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-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 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 also gain an understanding of the limited nature of fossil fuels.
- GEOS 341 Planetary Geology** **3c-3l-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-3l-4cr**
Corequisites: 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 345 Igneous and Metamorphic Petrology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 301
 Introduces the origins of metamorphic rocks in the context of plate tectonic activity, emphasizing melting and crystallization processes as well as metamorphic reactions. Laboratory exercises focus on rock identification and interpretation on hand sample and petrographic microscopy. Includes field trips that may occur on weekends.
- GEOS 352 Stratigraphy** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 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.
- GEOS 353 Paleontology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 201
 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 that may occur on weekends.
- GEOS 354 Geomorphology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 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.
- GEOS 355 Sedimentology** **3c-3l-4cr**
Prerequisite: Grade of “C” or better in GEOS 301
 A study of sediments and sedimentary rocks with emphasis on reconstruction of their origin, specifically depositional and post-burial history, from properties observed in outcrops, hand-specimens, and thin sections.

- GEOS 356 Coastal Processes and Geology** **3c-3I-4cr**
Prerequisites: GEOS 203, geoscience majors/minors, and earth and space science education majors/minors, or instructor permission
 The study of the origin and evolution of coastal environments from a geological perspective. Emphasis is placed on the quantitative investigation of the dominant processes (waves, tides, and currents) that create and modify these environments, as well as the role of human-induced change. Contemporary issues in coastal geology are explored through primary scientific literature, news media, and laboratory exercises. Includes field trips that may occur on weekends.
- GEOS 362 Plate Tectonics** **3c-3I-4cr**
Prerequisite: Grade of "C" or better in GEOS 201
 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 363 Volcanology** **3c-3I-4cr**
Prerequisite: Grade of "C" or better in GEOS 201
 Introduces volcanoes, volcanic eruption styles, and deposits in subaerial and submarine environments. Students assess risks and hazards associated with living near active volcanoes and discuss the cultural influences of volcanoes around the world throughout human history. Study of different types of volcanic eruptions through historical and pre-historical case studies. Laboratory exercises focus on rock identification and interpretation, fluid dynamics experiments, and learning laboratory and field skills of volcanologists that allow the determination of eruption dynamics.
- GEOS 370 Oceanography** **3c-3I-4cr**
Prerequisite: Grade of "C" or better in GEOS 201
 An introduction to physical, chemical, geological, and biological nature of the ocean: bathymetry, submarine geology, and sedimentary deposits. Includes field trip(s) that may occur on weekend(s).
- GEOS 371 Meteorology** **2c-3I-3cr**
Prerequisite: Grade of "C" or better in GEOS 201
 An introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.
- 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.)
- GEOS 405 American Southwest Seminar** **1c-0I-1cr**
Prerequisites: Grades 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.)
- GEOS 407 Carbonate Geology Seminar** **1c-0I-1cr**
Prerequisites: Grades 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.
- GEOS 409 Geology of Shale Gas—Field Workshop** **2c-3I-3cr**
Prerequisite: GEOS 119
 Intensive laboratory and field-based investigations of the geology of shale gas energy formation, development and extraction. Explores the geological formation and history of natural gas found in deep shale deposits and investigates technology used to extract these from the subsurface and how economic, environmental, and political factors influence the development of shale gas resources. Includes travel to field-based locations and rig-floor environments.
- GEOS 470 Research Methods in the Geosciences** **2c-0I-2cr**
Prerequisites: GEOS 202; 75cr or instructor permission
 For students enrolled in all majors within the Geoscience 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.
- GEOS 480 Geoscience Seminar** **2c-0I-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 that 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 Office of the Provost
 Independent study provides an opportunity to use library, laboratory, or field research in an area that is of interest under the supervision of a designated faculty member. Approval is based on academic appropriateness and availability of resources.
- GEOS 490 Field Studies in Geology** **var-1-4cr**
Prerequisites: GEOS 301; instructor permission
 Field-based geologic research in a variety of locations across the United States and the world. Through hands-on application, students learn how to formulate a field hypothesis, use field equipment to collect geological observations and samples, keep a field notebook, and create visual depictions of field data in the form of maps or cross-sections.
- GEOS 492 Soils and Soil Geochemistry** **2c-3I-3cr**
Prerequisite: Grade of "C" or better in GEOS 201
 Introduces the ways in which archaeologists and geoscientists define, recognize, examine, and interpret soils in both the field and the laboratory. Examines (1) how the interactions of landform, topography, climate, and biota result in patterns of soil development and the distribution of soils that we observe within the landscape; (2) the significance of soils to other disciplines, including archaeology, Quaternary geology, and geoenvironmental science; and (3) how the physical, chemical, and biological properties of soils are influenced by human activities both past and present. Includes field trips that may occur on weekends. (Offered as GEOS 313 before 2016-17.) (Also offered as ANTH 492; may not be taken for duplicate credit.)

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 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 I 4c-01-4cr
For beginning students. Introduction to the German language emphasizing communication through reading, writing, speaking, and listening. Focus on pronunciation and basic grammatical concepts to enable students to communicate in the present tense in a range of situations. They will be able to negotiate a limited number of personal needs and handle basic social interactions related to their daily lives. They become acquainted with a variety of cultural aspects of German-speaking countries. Attendance is required. May not register for or take a D/F repeat in GRMN 101 when credit has already been received for a higher-numbered German course.

GRMN 102 Elementary German II 4c-01-4cr
Prerequisite: GRMN 101 or equivalent
A continuation of GRMN 101. Emphasizing communication through reading, writing, speaking, and listening. Focus on pronunciation and expansion of grammatical concepts to enable students to communicate in present, past, and future tenses in a variety of situations. Students will be able to negotiate a limited number of personal needs, handle a range of interactions related to their daily lives, and manage simple social transactions. They expand their cultural knowledge of German-speaking countries. Attendance is required. Liberal Studies credit is given. May not register for or take a D/F repeat in GRMN 102 when credit has already been received for a higher-numbered German course.

GRMN 201 Intermediate German 4c-01-4cr
Prerequisite: GRMN 102 or equivalent
A continuation of GRMN 102. Emphasizing communication through reading, writing, speaking, and listening. Focus on pronunciation and expansion of grammatical concepts to enable students to communicate in present, past, and future tenses in a variety of situations. Students will be able to negotiate an increasing number of personal needs, handle a range of interactions related to their daily lives, and manage simple social situations and transactions. They expand their cultural knowledge of German-speaking countries. Attendance is required. Liberal Studies credit is given. May not register for or take a D/F repeat in GRMN 201 when credit has already been received for a higher-numbered German course.

GRMN 220 Intermediate German Conversation 3c-01-3cr
Prerequisite: GRMN 201 or equivalent, or instructor permission
Intensive work on oral communication skills with specific emphasis on spontaneous interpersonal speaking, discourse strategies, vocabulary building, and pronunciation. Required for all minors.

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 230 Intermediate German Composition and Grammar 3c-01-3cr
Prerequisite: GRMN 201 or equivalent
Intensive practice in written expression and communication in German together with a grammar review. Intermediate-level course with the goal of fostering writing in German for a variety of practical purposes. Review and expansion of specific grammar points are integrated into each unit. Taught in German.

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 372 Childhood Enchantment: The Fairy Tale in German Culture and Literature 3c-01-3cr
Prerequisite: GRMN 201 or instructor permission
Analyzes the role fairy tales have played in German culture and literature over time. Emphasizes the complex reflection of socio-political processes and realities in folk tales and literary fairy tales ("Kunstmärchen"), as well as the use of fairy tale motifs in other literary genres, film, the arts, music, advertising, and everyday life. Topics to be discussed may include, but are not limited to, gender roles, family relationships, the motif of the quest, the depiction of heroes and heroines, the conflict between good and evil, crime and punishment, the idea of justice, altruism versus egotism, the fairy tale and politics, etc. Taught in German.

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 Office of the Provost
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.

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 106 Samurai and Gongfu Heroes: Masculinity in East Asia 3c-01-3cr
Explores what it means to be a man, from the haohan of China to the Men of High Purpose of Japan and beyond. Analyses stories, films, and official histories that have encouraged Chinese and Japanese people to emulate the great heroes of the past and how these people and their stories have been

re-used in modern Asia. (Also offered as ASIA 106; may not be taken for duplicate credit.)

HIST 196 Explorations in US History **3c-01-3cr**

Interprets and analyzes the development of US history through a chronological survey of a historical era or a topical theme central to US history. Examines, where appropriate, the intersection of race and ethnicity, gender, and class. Emphasizes the recognition of historical patterns, the interconnectedness of historical events, and the incorporation of various subfields in the discipline of history. Successful completion of HIST 196 fulfills the Liberal Studies History requirement. HIST 197 and 198 also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

HIST 197 Explorations in European History **3c-01-3cr**

Interprets and analyzes the development of European history through a chronological survey of a historical era or a topical theme central to European history. Examines, where appropriate, the intersection of race and ethnicity, gender, and class. Emphasizes the recognition of historical patterns, the interconnectedness of historical events, and the incorporation of various subfields in the discipline of history. Successful completion of 197 fulfills the Liberal Studies History requirement. HIST 196 and 198 also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

HIST 198 Explorations in Global History **3c-01-3cr**

Interprets and analyzes the development of global history through a chronological survey of a historical era or a topical theme central to global history. Examines, where appropriate, the intersection of race and ethnicity, gender, and class. Emphasizes the recognition of historical patterns, the interconnectedness of historical events, and the incorporation of various subfields in the discipline of history. Successful completion of HIST 198 fulfills the Liberal Studies History requirement. HIST 196 and 197 also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

HIST 201 Western Civilization before 1600 **3c-01-3cr**

Prerequisite: 3cr of college history, or current major in any of the following: history, history/pre-law, middle-level education grades 4-8/social studies specialization, or secondary social studies
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 history majors or by instructor's permission.

HIST 202 Western Civilization since 1600 **3c-01-3cr**

Prerequisite: 3cr of college history, or current major in any of the following: history, history/pre-law, middle-level education grades 4-8/social studies specialization, or secondary social studies
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 history majors or by instructor's permission.

HIST 204 United States History to 1877 **3c-01-3cr**

Prerequisite: 3cr of college history, or current major in any of the following: history, history/pre-law, middle-level education grades 4-8/social studies specialization, or secondary social studies
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: 3cr of college history, or current major in any of the following: history, history/pre-law, middle-level education grades 4-8/social studies specialization, or secondary social studies

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 The History of East Asia **3c-01-3cr**

History of China and Japan from ancient times, Buddhism, medieval Japan, Chinese communism, industrialization, and the modern Pacific Rim. Some consideration of peripheral Asia.

HIST 207 The History of the Middle East **3c-01-3cr**

History of the Middle East from the late Byzantine and Sassanid period, Islam, medieval Islamic civilization and the rise of early modern dynasties, European imperialism, the origins of modern nation states, and the contemporary Middle East.

HIST 251 United States Military History **3c-01-3cr**

Prerequisite: Not applicable toward the history 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 295 Introduction to Historical Studies **3c-01-3cr**

Prerequisite: History, history/pre-law, or social studies education majors
First of a two-course sequence. Introduces students to the study of history, analysis of primary and secondary sources, historical interpretation and historical writing. The student is encouraged to become a better historian and to identify with the historical profession.

HIST 301 History of Ancient Greece **3c-01-3cr**

Prerequisites: Sophomore standing, 3cr of college history
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, 3cr of college history
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, 3cr of college history
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, 3cr of college history
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, 3cr of college history
History of Europe from approximately 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, 3cr of college history
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, 3cr of college history
The study of Europe in 19th century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.

- HIST 310 Making Italy Modern** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 Surveys the principal themes in the transformation of Italian cultural, social, economic, and political structures since the 19th 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, 3cr of college history
 An in-depth study of Hitler and the Nazi order; offers an analysis of 19th-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, 3cr of college history
 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, 3cr of college history
 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, 3cr of college history
 A survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to 17th-century conflict between Crown and Parliament.
- HIST 322 French Revolution and Napoleon** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 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, 3cr of college history
 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 326 History of Russia** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 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, 3cr of college history
 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, 3cr of college history
 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, 3cr of college history
 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 and 3cr of college history
 A survey of changes that have taken place in Middle East and in Islam since 18th century and of contemporary problems in that region.
- HIST 332 History of Early China** 3c-01-3cr
Prerequisites: Sophomore standing and 3cr of college history
 China from the dawn of time 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 and 3cr of college history
 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 19th century. Reforming China from the 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, 3cr of college history
 The history of Japan from the beginning of the Tokugawa period to the present. Japan's early modern political, economic, and social systems; its transformation in the Meiji era; and the Japanese people's struggles and successes in the 20th century.
- HIST 338 The History of Iran** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 Focuses on aspects of Iranian history from the Achaemenid period until the present that are significant for the formation of modern Iranian identity. Uses primary sources, secondary readings, literature, and film to analyze the development of Iranian identity as well as modern perceptions of Iran. Emphasis on ancient Iranian culture and religion, the story of Iranian wars with the Greeks and Romans, how Iran became Muslim, and the development of contemporary Iranian religion and politics.
- HIST 339 Jihad and the Origins of Islamist Movements in the Middle East** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 Discusses the concept of "jihad" in Islamic history: its origins, development, and historical deployment by groups within the Muslim community. Analyzes the history and origins of groups such as al-Qaeda, the Taliban, and ISIS and considers whether these groups are "medieval" or actually modern products of globalization. (Also offered as PLSC 339; may not be taken for duplicate credit.)
- HIST 340 Colonial America** 3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history
 A survey of original 13 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, 3cr of college history
 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, 3cr of college history
 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, 3cr of college history
 The study of the failure of American democracy to cope with issues of mid-19th century, followed by political, economic, military, and social developments during war and reconciliation of North and South.
- HIST 345 America in War and Depression, 1914-1945** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 A study of the social, economic, political, and cultural response to war and depression in America. Topics include the World War I, the 1920s, the Depression, the New Deal, and the World War II.
- HIST 346 Recent United States History** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 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 348 Top Secret America: The Rise and Reach of the National Security State** **3c-01-3cr**
 Focuses on the historical development of the concept of national security in the US and on the intersection of national and broader international security concerns in the Cold War context. Identifies, for the Cold War era and beyond, diplomatic, military, and intelligence capabilities of governments and explores how individuals and groups conceptualized themselves, and their security. Explores one powerful motivator: fear and how it translated into political actions and citizen involvement in Cold War concepts. HIST 348 and PLSC 348 may be substituted interchangeably for D/F repeats, but may not be used for duplicate credit.
- HIST 350 History of Latin America: Colonial Period, 1450-1820** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 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, 3cr of college history
 A study of the history of nations that 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 362 History of American Diplomacy, 1900-present** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Treats primarily our 21st-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, 3cr of college history
 Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic movement.
- HIST 365 History of Black America since Emancipation** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 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 369 Women in America** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 A study of the activities of women from the colonial era to the modern era—evaluating cultural, societal, religious, economic, and political frame-
- works. Reviews women's involvement in movements for feminism, social reform, unionism, and the abolition of slavery.
- HIST 372 History of the Early American Working Class** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Description and analysis of the nature and significance of the working class of the United States in the 18th and 19th 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, 3cr of college history
 Description and analysis of the nature and significance of the working class of the United States in the 21st 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, 3cr of college history
 Studies the relationship between urban, entrepreneurial crime and the evolution of industrial America.
- HIST 379 History in the Digital Age** **3c-01-3cr**
Prerequisite: History and social studies education/history majors; not applicable toward Social Studies Education requirements; sophomore standing; 3cr of college history
 Examines the changes that digital technologies are bringing to the field of history and how historians research, write, present, and teach the past. Students investigate the development of this new media and study the state of digital historical work by scholars, teachers, archivists, museum curators, and popular historians. As they examine this work, students also explore the philosophical and ethical issues raised by efforts to put history online. Finally, students are given an introduction to some of the programs used by historians and the public to create digital history.
- HIST 385 People in Nature: An Introduction to Environmental History** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Examines the ways in which human perceptions of nature, human manipulations of nature, and natural constraints on human activities have interacted and changed over time. Drawing material from early modern and modern Europe as well as the United States, this course treats the effects of climate change, industrialization, agricultural crisis, deforestation, and modern conservation and environmentalism through rotating case studies. Examines the following comprehensive questions with each case study: How have climate, soil, biota, and other natural factors shaped human ways of making a living from the land? How have they influenced culture more generally? How has human action, in various times and places, modified natural ecosystems? How do we describe the resulting "hybrid" landscapes? How have different cultures described and analyzed nature?
- HIST 391 Film as History** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 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, 3cr of college history
 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 395 Introduction to Historical Methods** **3c-01-3cr**
Prerequisite: HIST 295
 A colloquium focusing on historiography and historical methods in the context of a specific topic. Students are expected to improve their research and writing skills and their understanding of historiography and methods of historical research. (writing-intensive course)
- HIST 420 Introduction to Public History** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Introduces students to a wide range of activities in which public historians engage. Considers broader conceptual theoretical and practical issues associated with historic preservation, museum studies, oral history, the management of archival and manuscript collections, as well as a variety of other public history activities. Also considers broader conceptual issues associated with the field of public history. None of the Public History courses (HIST 420, 421, 422, or 423) may be counted towards the BSEd—Social Studies Education/History Track. Only one may be counted towards the BA—History or the BA—History/Pre-law Track.
- HIST 421 Archival Studies** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 An introduction to the archival profession and its practices. None of the Public History courses (HIST 420, 421, 422, or 423) may be counted towards the BSEd—Social Studies Education/History Track. Only one may be counted towards the BA—History or the BA—History/Pre-law Track.
- HIST 422 History Museums and Historic Sites: Theory and Practice** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 An introduction to the history of museums and historic sites. Focuses on the relationship between history and public audiences, on the theory and practice of telling stories through museums, historic sites, and living history. Introduces the tools that public historians use to interpret the past, explores key dilemmas in public interpretation and community collaboration, and examines contemporary models on how to reach audiences in ways that make history resonant and meaningful to them. None of the Public History courses (HIST 420, 421, 422, or 423) may be counted towards the BSEd—Social Studies Education/History Track. Only one may be counted towards the BA—History or the BA—History/Pre-law Track.
- HIST 423 Oral History Practice** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Introduces the practices of collecting and preserving oral histories, as well as the research and public use of oral histories. None of the Public History courses (HIST 420, 421, 422, or 423) may be counted towards the BSEd—Social Studies Education/History Track. Only one may be counted towards the BA—History or the BA—History/Pre-law Track.
- HIST 433 China 1300-1800: The Late Imperial Age** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Examines the cultural and social history of Late Imperial China. Includes elite attempts at creating an orderly Confucian society and also how less powerful groups altered or challenged this vision. Discusses the role of commercialization and commercial culture and China as an Early Modern society. (Titled *Bandits and Poets: The Cultural and Social History of Late Imperial China before 2016-17.*)
- HIST 434 Modern China 1800-present** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 China's modern transformation from the crisis of the Late Qing through the various revolutionary governments of the 20th century to the rise of China as a world power. Looks at both Chinese elites' quest for wealth and power and the impact this quest has had on ordinary people. (Titled *History of Modern China: From the Opium Wars to the Present before 2016-17.*)
- HIST 436 Japan 1500-1850: Early Modern Japan** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Examines the cultural and social history of Early Modern Japan, including both Sengoku and the Tokugawa. This includes elite attempts at creating a stratified social order and also how less powerful groups altered or challenged this vision. Discusses the role of commercialization and commercial culture and Japan as an Early Modern society. (Titled *Geisha and Samurai: The Cultural and Social History of Early Modern Japan before 2016-17.*)
- HIST 437 Modern Japan 1850-Present** **3c-01-3cr**
Prerequisites: Sophomore standing, 3cr of college history
 Japan's modern transformation from the age of the samurai to the present. Looks at both the Japanese elites' quest for wealth and power in the late 19th and the 20th centuries and the impact this quest has had on ordinary people. (Titled *The History of Modern Japan: From the Floating World to the Present before 2016-17.*)
- HIST 475 History of American Constitutionalism** **3c-01-3cr**
Prerequisites: Sophomore standing and 3cr college history
 Examines the major themes and problems concerning the constitutional history of the United States from the American Revolution to the end of the Cold War. Among other subjects, explores why and how the United States Constitution was written; how the nature and scope of the powers of Congress, presidency, and judiciary were transformed; how the relationship between the federal government and the states evolved; and how such constitutional amendments as the first and 14th redefined the power of governments, as well as the rights of citizens.
- 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 history majors or by instructor's permission.
- HIST 481 Special Studies in History** **var-1-3cr**
Prerequisites: As appropriate to course content, sophomore standing, 3cr of college history
 Offered each semester 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. 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 Office of the Provost 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: History, history/pre-law, or social studies education/history major; 3.25 cumulative GPA; 3.5 GPA in history 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 that varies from semester to semester according to the expertise of the faculty member teaching the course. Open to all Cook Honors College students who have completed HNRC 201 and, with instructor permission, to junior and senior history, history/pre-law, or social studies education 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.

HIST 495 Topics in United States History 3c-01-3cr
Prerequisites: HIST 395 and junior/senior history, history/pre-law, or social studies education 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. May be repeated. (Offered as HIST 401 before 2014-2015.)

HIST 496 Topics in European History 3c-01-3cr
Prerequisites: HIST 395 and junior/senior history, history/pre-law, or social studies education 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. May be repeated. (Offered as HIST 402 before 2014-15.)

HIST 497 Topics in Non-Western History 3c-01-3cr
Prerequisites: HIST 395 and junior/senior history, history/pre-law, or social studies education 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. May be repeated (Offered as HIST 403 before 2014-15.)

HIST 498 Topics in Comparative History 3c-01-3cr
Prerequisites: HIST 395 and junior/senior history, history/pre-law, or social studies education 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. May be repeated. (Offered as HIST 404 before 2014-15.)

**HNRC: Honors College
Cook Honors College
Academic Affairs Division**

HNRC 101 Honors Core I 5c-01-5cr
Prerequisites: Freshman status, admission to the Honors College
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 integrated, 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 Honors College
The second in a series of three required and interrelated courses. 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 Honors College, and successful completion of HNRC 101 and 102 if admitted to the Honors College as a first-year student. Prerequisites for students admitted to the

Honors College 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 Honors College
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 what use might be made of scientific knowledge. These themes are explored from disciplines in the natural and social sciences.

HNRC 499 Honors Senior Synthesis var-3-6cr
Prerequisites: 3.25 GPA, Honors College 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.

**HOSP: Hospitality Management
Department of Hospitality Management
College of Health and Human Services**

Note: Hospitality management courses were offered under the prefix HRIM before 2015-16

HOSP 101 Introduction to the Hospitality Industry 3c-01-3cr
Examines 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. Students are required to complete 10 hours of service learning.

HOSP 130 Food Service Sanitation 3c-01-1cr
Introduces concepts and issues pertaining to sanitation and security management in the food service segment of the hospitality industry. Examines causes and prevention of food-borne illness, Hazard Analysis Critical Control Point (HACCP) food production methods, and current government regulations. (Titled Hospitality Sanitation and Security before 2015-16.)

HOSP 150 Principles of Hospitality Management 3c-01-3cr
Introduces classic management theory and responsibilities, with an emphasis on hospitality industry applications.

HOSP 212 Club Operations Management 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.

HOSP 235 Tourism Management 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. (Offered as HOSP 115 before 2017-18.)

HOSP 245 Multicultural Management in Hospitality 3c-01-3cr
Prerequisite: Sophomore standing
Examines the effects of international migration and changing roles of minorities within the global and domestic hospitality industry. Addresses the cultural factors affecting workplace productivity and relationships.

HOSP 250 Resort Management 3c-01-3cr
Identifies characteristics of hospitality industry resort operations. Includes resort history, resort planning and development, food and beverage operations, lodging operations, recreational activities, and other relevant operational characteristics.

HOSP 255 Housekeeping Management	3c-01-3cr	HOSP 300 Critiquing Commercial Restaurants	1c-01-1cr
Examines the operational responsibilities of the housekeeping department as found within hotel and lodging operations. Staffing, planning, cost management, purchasing, and cleaning responsibilities of hotel and lodging guestrooms, public areas, recreational areas, and other operational areas are addressed.		A opportunity for the student of hospitality management 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. Students incur out-of-pocket dining expenses.	
HOSP 256 Human Resources in the Hospitality Industry	3c-01-3cr	HOSP 310 Professional Development in the Hospitality Industry	2c-01-2cr
Prerequisite: ENGL 101		Prerequisite: HOSP 256	
Examines human resource 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. Students are required to complete 10 hours of service learning.		An opportunity to identify and design industry-specific job search strategies, techniques, and skills including résumé and cover letter writing, interviewing, portfolio development, and strategies to attain career success within the hospitality industry.	
HOSP 259 Hospitality Purchasing	3c-01-3cr	HOSP 313 Food Production and Service	1c-6l-4cr
Includes sources, standards, grades, methods of purchase, and storage of various foods, beverages, and fixtures. Emphasizes the development of purchasing policies and specifications.		Prerequisites: HOSP 130, 150, instructor permission	
HOSP 260 Hotel Operations Management	3c-01-3cr	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.	
Examines the development and classification of lodging operations. Hotel operating departments, department personnel, operational procedures, and current lodging trends and companies are discussed.		HOSP 320 Hospitality Marketing	3c-01-3cr
HOSP 265 Hospitality Cost Management	3c-01-3cr	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.	
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.		HOSP 326 Theme Park and Attraction Management	3c-01-3cr
HOSP 270 Professional Wedding Planning and Consulting	3c-01-3cr	Prerequisite: HOSP 235	
An introduction to wedding planning and consulting in the hospitality industry. Examines the methodologies involved in planning all aspects of weddings, including venue selection, ceremony alternatives and protocol, reception considerations, budget development, vendor selection, contract negotiation, and other related topics.		Provides a comprehensive view and an in-depth understanding about the various operational areas and managerial issues in theme parks and attractions.	
HOSP 272 Meeting and Convention Management	3c-01-3cr	HOSP 330 Applications of Food Production and Service	1c-6l-4cr
An introduction to the management and economic impact of the convention, meeting, and exposition industry. Focuses on the development of strategies used to manage conferences, meetings, and trade shows to include the methodologies unique to each property and group served.		Prerequisite: HOSP 313 or FDNT 150/151	
HOSP 280 Special Event Management	3c-01-3cr	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.	
Introduces the principles of special event management and current practices and developments within the event-management industry. Discusses event management responsibilities from the initial planning stages through delivery.		HOSP 335 Legal Issues in Hospitality	3c-01-3cr
HOSP 281 Special Topics	var-1-3cr	Prerequisite: HOSP 256	
Prerequisite: As appropriate to course content		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.	
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.		HOSP 343 Fund-Raising for Special Events	3c-01-3cr
HOSP 285 Service, Menu Planning, and Facilities Design	3c-01-3cr	Prerequisite: HOSP 280	
Focuses on food and beverage service characteristics, menu planning and design, and facilities design within various operational concepts in the hospitality industry.		Relevant management tools, techniques, and strategies used for acquiring event revenue through fundraising 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.	
HOSP 299 Cooperative Education (First Experience)	0cr	HOSP 346 Catering for Special Events	3c-01-3cr
Prerequisites: Completion of 30cr, 2.0 GPA		A practical understanding of the management tasks of a caterer and his/her relationship to the special events industry.	
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.		HOSP 350 Introduction to the Casino Industry	3c-01-3cr
		Examines the global casino industry from a historical perspective and includes legal, social, and economic issues. Also reviews the various games played in casinos, current trends, and popular global casino destinations.	
		HOSP 358 Restaurant Equipment and Design	3c-01-3cr
		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.	

HOSP 365 Hospitality Physical Plant Management	3c-01-3cr	HOSP 433 Educational Study Tour	var-2-6cr
Analyzes principles of hospitality operation design, construction, and physical plant management. Discusses hospitality maintenance department responsibilities and operations. (Titled Hotel Facilities Management before 2015-16.)		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.	
HOSP 367 Festival Management	3c-01-3cr	HOSP 450 Training, Development, and Supervision in Hospitality Management	3c-01-3cr
Prerequisite: HOSP 280		Prerequisite: Instructor permission	
Examines the international, regional, and local perspective of festivals and festival-event management. Examines and evaluates management, marketing, financial, and operational considerations together with strategies necessary to ensure viable festivals. (Offered as HOSP 275 before 2017-18.)		Applied course in which students identify effective practices and examine current issues related to training and development within the hospitality industry.	
HOSP 400 Restaurant Revenue Management	3c-01-3cr	HOSP 460 Labor and Employee Relations in the Hospitality Industry	3c-01-3cr
Prerequisite: Junior standing		Prerequisite: Instructor permission	
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.		Explores the history of the labor movement and the development of employee relations in the hospitality industry examining the major industry segments including lodging, restaurants, casinos, clubs, and related businesses. Students engage in a research project with the intention of presentation and/or publication submission	
HOSP 402 Beverage Management	3c-01-3cr	HOSP 470 Hospitality Business Planning	3c-01-3cr
Prerequisite: Verifiable proof of 21 years of age or permission		Prerequisites: Senior status and instructor 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.		Provides the opportunity to integrate and apply hospitality operations management concepts into the development of a working hospitality business model.	
HOSP 403 Wine and Wine Service	3c-01-3cr	HOSP 481 Special Topics	var-3cr
Prerequisite: All students must be 21 years of age or older		Prerequisite: As appropriate to course content	
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.		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.	
HOSP 404 Brew Pub and Brewery Operations	3c-01-3cr	HOSP 482 Independent Study in Hospitality Management	var-1-6cr
Prerequisite: Verifiable proof of 21 years of age or older		Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
Addresses the art of brewing beer, beer styles, brewing equipment requirements, responsible alcohol service, beer and food pairing, sales, and marketing. Students visit local breweries and brew pubs. Students are required to attend three daylong field trips.		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.	
HOSP 408 Hospitality Contract Operations Management	3c-01-3cr	HOSP 493 Internship	var-3-12cr
Examines characteristics of managing human resources, capital, materials, equipment, products, and markets as they pertain to hospitality contract operations. (Titled Institutions Management before 2015-16.)		Prerequisites: 60 earned credits, 2.0 overall GPA	
HOSP 411 Contemporary Issues in Hospitality	3c-01-3cr	An opportunity for students to work in a supervised experience directly related to the hospitality management major. Must meet university and departmental internship requirements. Minimum of 40 work hours required for each scheduled credit.	
Prerequisites: ENGL 101		<i>Note:</i> Kitchen food production uniforms are required for all lab courses in which food is prepared. Students must meet the professional dress requirements of the department.	
Discussion of contemporary issues within the hospitality industry. Students write a series of opinion/reaction papers to presented discussion topics.			
HOSP 413 Restaurant Food Production and Service	1c-6l-4cr	IFMG: Information Management Department of Information Systems and Decision Sciences Eberly College of Business and Information Technology	
Prerequisites: Instructor 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.		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.	
HOSP 420 Hotel Sales	3c-01-3cr	IFMG 101 Computer Literacy	3c-01-3cr
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 is made. Identification of and approaches to securing typical hotel market segments are covered.		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 computer science 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/F repeats but may not be counted for duplicate credit.

IFMG 110 Business Spreadsheet Computing **3c-01-3cr**

Introduces the fundamentals of the use of spreadsheet technology in the business environment. Familiarizes the students to the different formats and setups for business data. Illustrates various uses of spreadsheet formulas and functions in the business environment. Explains the application of charts and graphs for data analysis and also for collecting and sharing data. Demonstrates the use of spreadsheet tools in the analysis of research data.

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. 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 254 Computer Technology Virtualization **3c-01-3cr**

Prerequisite: IFMG 250

Introduces virtualization technology in the computing environment through the study of various related tools. Highlights key issues related to creating and using the virtual environment infrastructure. Presents alternatives for incorporating virtualization solutions at organizations. Uses technological case studies and practical applications. Prepares students to propose virtualization solutions for enterprise computing environments.

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 management information systems (MIS). MIS majors may not count this course toward their graduation requirements.

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 computer science 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 360 Information Storage and Management **3c-01-3cr**

Prerequisite: IFMG 352

Provides the knowledge for understanding the storage infrastructure required to store this information in personal, enterprise, and cloud computing settings. Focuses on the different components of storage infrastructure and how to successfully manage it. Examines basic and advanced concepts of storage technology to enable evaluation and design of storage architectures with features to meet a variety of technical and business needs. Considers disaster recovery and business continuity solutions such as backups, replication, and archiving which is related to the broader field of information assurance.

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 is introduced.

IFMG 390 Database Theory and Practice **3c-01-3cr**

Prerequisite: IFMG 210 or 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.

IFMG 414 Internet of Things **3c-01-3cr**

Prerequisites: IFMG 352 and IFMG 210 or 230

Introduces the world of the Internet of Things (IoT) including conceptual foundations and practical applications. Presents the theoretical concepts and the hands on knowledge on creating and managing IoT applications through assigned readings, prototyping, simulation, and mock-up exercises. Classifies business models applicable to IoT. Examines the ethical standards pertinent to the field of IoT.

IFMG 455 Business Data Mining **3c-01-3cr**

Prerequisite: IFMG 390

Introduces the strategies, technologies, and techniques associated with this growing MIS specialty area. Consists of three main parts: (1) the basic methodology for designing, using, and managing a data warehouse, (2) integrating different sources of data using non-relational technologies, and (3) using different data mining techniques to derive information from data for strategic and long-term business decision-making. (Titled Data Warehousing and Mining before 2016-17.)

IFMG 456 Business Intelligence, Informatics, and Big Data Analysis **3c-01-3cr**

Prerequisites: QBUS 215, instructor permission (determination of appropriate background done by the instructor)

Primarily concerned with business analysis dealing with quantitative approaches, including those involving big data, for decision making for Business Intelligence and Informatics (BII). Big Data (BD) is the term for a collection of data sets that are so large and complex that it becomes difficult to process this data by using on-hand database management tools or traditional data processing applications alone.

IFMG 460 Analysis and Logical Design 3c-01-3cr**Prerequisites:** (IFMG 210 or 230) and IFMG 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 471 Data Center and Cloud Computing 3c-01-3cr**Prerequisites:** IFMG 254, 360

Introduces the building and managing of data centers as a cloud on the network. Focuses on the fundamentals regarding data center system configuration, networking, storage, and application. Examines different kinds of cloud service and delivery models. Discusses the management of data center security.

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 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 Office of the Provost

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 493 Internship in MIS var-3-12cr**Prerequisites:** IFMG 352, 390, consent of department chairperson

Positions with participating business, industry, or governmental organizations provide experience in systems analysis. Note: Can be taken as a 3cr major-area elective requirement.

INDS: Interior Design
Department of Human Development, Fashion, and Interior Design
College of Health and Human Services

INDS 105 Introduction to Interior Design 3c-01-3cr

Presents an overview of the interior design profession. Emphasizes the responsibilities of the interior designer and the many career opportunities available.

INDS 110 Color and Light 3c-01-3cr

Focuses on color and lighting fundamentals applicable to the environmental design of commercial and residential spaces. Includes general color and lighting terminology, theory of color visibility and perception, and how color and light work together to create functional, aesthetic, and sustainable interior environments.

INDS 118 Interior Design Graphics 1c-31-3cr

Introduces two- and three-dimensional traditional graphic skills including basic sketching, drafting, and perspective drawing as applicable to the responsibilities of interior designers. Emphasizes acceptable drafting standards, graphic layout, and visual organization through projects.

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 218 Computer Technology for Interior Design 1c-31-3cr

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 219 Kitchen and Bath Design 1c-31-3cr**Prerequisite:** Junior standing

Explores many facets of the kitchen- and bath-design industry. Analyzes kitchen and bathroom spaces according to the National Kitchen and Bath Association (NKBA) standards. Utilizes current design software. (Offered as INDS 319 before 2017-18.)

INDS 230 Presentation for Interior Design 1c-31-3cr**Prerequisite:** INDS 118

Introduces visualization approaches used for professional presentations of interior design concepts. As a project-based course, the focus is on both two- and three-dimensional drawings and the use of color to create depth and enhance the quality of both traditional and digital drawings used to present interior design solutions.

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 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 ensure that the user can function with a minimum of stress and a maximum of efficiency.

INDS 313 Building Systems I: Materials and Finishes 3c-01-3cr**Prerequisite:** Junior standing

Introduces the basic methods of structural and non-structural construction including ceilings, floors, walls, doors, and windows relative to interior space planning. Focuses on the materials and finishes used to complete the interior space, as well as those used on furniture, fixtures, and equipment. Examines manufacturing techniques, application, specification guidelines, estimating, and installation methods. Considers relevant codes, environmental issues, and impact on the responsibilities and decision making of interior designers.

INDS 315 Residential Design Studio 1c-31-3cr**Prerequisite:** INDS 218

Applies interior design space planning and design problem-solving processes to residential design and emphasizes digital and graphic communication and presentation of those solutions.

INDS 323 Building Systems II: Mechanicals 3c-01-3cr**Prerequisite:** INDS 313

Provides a broad overview of the various architectural building systems (mechanical, lighting, electrical, plumbing, acoustic, thermal, communications, security, and conveyance) as they affect the responsibilities and decision making of interior designers. Addresses relevant building and fire codes, vocabulary, and environmental concerns.

INDS 370 History of Interior Design and Architecture I 3c-01-3cr
Chronological study from ancient times to the mid-19th century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. Emphasis placed on stylistic detail and its relationship to social, economic, political, religious, and aesthetic influences and to the contemporary scene.

INDS 380 History of Interior Design and Architecture II 3c-01-3cr
Prerequisite: INDS 370

Chronological study from mid-19th century to the present of the dominant influences and characteristics of interiors, furniture, and ornamental design. Emphasis placed on stylistic detail and its relationship to social, economic, political, religious, and aesthetic influences and to the 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 460 Portfolio 1c-21-3cr
Prerequisite: Senior standing

Focuses on professionalism in the preparation of an interior design portfolio. Concentrates on traditional portfolio composition with an emphasis on the ability to transition to digital portfolio as necessary.

INDS 464 Commercial Design Studio 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 Commercial Design Studio 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 more than 10,000 square feet.

INDS 482 Independent Study var-1-3cr

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost
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.

JAPN: Japanese
Department of Foreign Languages
College of Humanities and Social Sciences

JAPN 101 Elementary Japanese I 4c-01-4cr

For beginning students. Introduces the Japanese language, with attention focused on three modes of communication: interpretive listening and reading, interpersonal speaking and writing, and presentational speaking and writing. Students learn pronunciation, fundamental grammatical patterns, and how to write hiragana, katakana, and basic kanji. Students learn to converse and ask questions in simple present and past time and become acquainted with aspects of Japanese culture and society. May not register for or take a D/F repeat in JAPN 101 when credit has already been received for a higher-numbered Japanese course.

JAPN 102 Elementary Japanese II 4c-01-4cr
Prerequisite: JAPN 101 or equivalent

A continuation of JAPN 101. Focusing on communication through listening, speaking, reading, and writing. Students continue to learn to identify and write basic kanji characters. Builds on the three modes of communication—interpretive, interpersonal, and presentational—to build proficiency in using the Japanese language in real-life situations. Also imparts knowledge of Japanese culture and society. May not register for or take a D/F repeat in JAPN 102 when credit has already been received for a higher-numbered Japanese course.

JAPN 201 Intermediate Japanese 4c-01-4cr

Prerequisite: JAPN 102 or equivalent

A continuation of JAPN 102. Focusing on communication through listening, speaking, reading, and writing so that students can function in everyday situations. Students continue to learn to identify and write intermediate kanji characters. Also imparts knowledge of Japanese culture and society. Liberal Studies credit is given. May not register for or take a D/F repeat in JAPN 201 when credit has already been received for a higher-numbered Japanese course.

JRNL: Journalism and Public Relations
Department of Journalism and Public Relations
College of Humanities and Social Sciences

JRNL 102 Basic Journalistic Skills 3c-01-3cr

Required for journalism and public relations majors and minors. Emphasizes grammar, punctuation, spelling, *AP Stylebook*, copyediting, headlines, and accuracy.

JRNL 105 Journalism and the Mass Media 3c-01-3cr

A critical examination of the roles-goals of the mass media (newspapers, magazines, radio and television, Internet and other online services) as they affect the American society socially, politically, culturally, and economically.

JRNL 120 Journalistic Techniques for Professional Writing 3c-01-3cr

Prerequisites: ENGL 101, nonmajors/minors

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.

JRNL 126 Introduction to Public Relations 3c-01-3cr

Introduces students to the principles, practices, programs, and possibilities in the various areas of public relations.

JRNL 215 Media Convergence in Journalism 3c-01-3cr

Explores the digitization of journalism, public relations, and its many forms. Students learn how to digitize and work with media including the capture, editing, and distribution of new media, as well as the history and economics of digital media.

JRNL 220 Writing for Media 3c-01-3cr

Prerequisites: JRNL 102 with a grade of “C” or better, journalism and public relations majors only

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—and in digital and online media, such as writing for blogs and writing in chunks. Throughout, emphasizes economy, clarity, and the development of voice for a given medium.

JRNL 223 Photojournalism 3c-01-3cr

Prerequisite: JRNL 105 or COMM 101 or instructor permission

An introduction to still photography for news media. Includes preparation of a portfolio and learning of specialized processing techniques for high-speed work.

JRNL 243 History of the American Press 3c-01-3cr

Prerequisite: JRNL 105 or COMM 101

Traces the development of the American press from its Colonial roots. Emphasizes the role of the press in political and social development.

JRNL 250 Women and the Press 3c-01-3cr

Prerequisites: ENGL 101

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.

JRNL 261 Introduction to the Magazine Industry	3c-01-3cr	Amendment rights of a free press. Also focuses on media ethics and its application in journalism.
Prerequisite: Sophomore standing or instructor permission		
Introduces the magazine industry, how it is managed, how it functions, its strategies, and its roles and goals in society.		
JRNL 281 Special Topics	var-1-3cr	JRNL 348 Opinion Writing
Prerequisite: As appropriate to course content		Prerequisite: Junior/senior standing
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.		
JRNL 301 Presentation Making	3c-01-3cr	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.
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 310 Writing for Online Media	3c-01-3cr	JRNL 375 World News Coverage
Prerequisite: JRNL120 or 220 or instructor permission		Prerequisites: Sophomore standing, instructor permission
Teaches techniques to help students develop reporting, writing, and editing skills to communicate effectively in an online media environment. Focuses on the continuum of the online news cycle, nonlinear nature, and interactive elements of the online platform and fundamental differences and similarities between online and traditional media, including ethical and legal uses.		
JRNL 321 Feature Writing	3c-01-3cr	Challenges students to compare and contrast the coverage of international news sources from around the world and how they impact people's awareness, attitudes, and behavior in a multiculturally differentiated world. Emphasis is placed on interpreting comparative coverage of events among the developing world and the Western-dominated international news media sources and understanding the geopolitics of world news. Students critique not only current international news but, more important, how it is reported. The goal is to foster a critical and analytical attitude toward news to gain a broad-based, balanced, global, and multicultural awareness of the human subjects of international news.
Prerequisites: JRNL 102, 220		
For the student who might work in journalism or who might wish to write on a part-time or freelance basis.		
JRNL 325 Public Relations Campaigns	3c-01-3cr	JRNL 400 Professional Preparation
Prerequisites: JRNL 126, 220		Prerequisites: JRNL 328, journalism and public relations major
An advanced public relations course that teaches students to plan a comprehensive public relations campaign from start to finish, following the Research, Plan, Execute, Evaluate Model. Students outline plans for contacting media outlets and creating and maintaining social media communities. They create slogans and advertisements consistent with branding.		
JRNL 327 Layout, Design, and Production	2c-3l-3cr	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.
Prerequisite: JRNL 105 or COMM 101		
Basic techniques and theories of layout, design, and production, including typography, copyfitting, photo/art cropping and scaling, and steps in design process. Includes desktop publishing in the design of ads, newspapers, newsletters, brochures, and magazines.		
JRNL 328 News Reporting	3c-01-3cr	JRNL 425 Entertainment PR
Prerequisites: Grades of "C" or better in JRNL 102, 105, and 220; majors only		Prerequisites: JRNL 126, 220
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.		
JRNL 337 Editing	3c-01-3cr	An advanced public relations course that explores image building, image repair, and personal public relations as they relate to the entertainment industry. Students critically examine the entertainment field—to include sports, tourism, music, theater, movies—through a public relations lens.
Prerequisite: JRNL 120 or 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.		
JRNL 344 Issues and Problems	3c-01-3cr	JRNL 427 Publications
Prerequisite: JRNL 105 or COMM 101		Prerequisite: JRNL 327 or instructor permission
Examines critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.		
JRNL 345 Sports Journalism	3c-01-3cr	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.
Prerequisite: JRNL 220		
Emphasizes skills for covering, writing, and editing of sports and introduces specific practices in newspaper, radio-TV, and sports information work.		
JRNL 347 Journalism Law and Ethics	3c-01-3cr	JRNL 430 Public Opinion and the News Media
Prerequisites: JRNL 105 or COMM 101, permission		Prerequisite: Junior standing
Introduces students to the laws that govern the mass media in America, notably libel, privacy, and free press/fair trial and their impact on First		

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 Office of the Provost
Opportunities for independent study that go beyond the usual classroom activities. Approval based on academic appropriateness and availability of resources; enrollment is limited to 15 upperclass majors per semester.

JRNL 490 Public Relations Writing **3c-01-3cr**
Prerequisites: JRNL 126, 220
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 492 Problem Solving in Public Relations **3c-01-3cr**
Prerequisite: JRNL 126
Introduces techniques for analyzing and tracking information flow in organizations. Introduces creative problem-solving techniques that are standard practice in corporate research groups.

JRNL 493 Internship **var-6-12cr**
Prerequisites: Grades of "C" or better in JRNL 102, 105, 220, 328, 347, 400; 2.3 cumulative GPA and 2.5 GPA in the major; department approval
On-the-job training opportunities in journalism and related areas. Maximum of 6cr may be applied to 34cr minimum of major.

KHSS: Kinesiology, Health, and Sport Science
Department of Kinesiology, Health, and Sport Science
College of Health and Human Services

KHSS 135 Careers in Kinesiology, Health, and Sport **1c-01-1cr**
Prerequisite: Health and physical education, physical education and sport, or athletic training majors
Emphasizes development of attributes associated with professionalism and examines occupational opportunities that exist for students majoring in kinesiology, health, and sport.

KHSS 142 Foundations of Health, Physical Education, and Sport **3c-01-3cr**
Prerequisite: Health and physical education, physical education and sport, athletic training majors
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.

KHSS 143 Contemporary Women's Wellness **3c-01-3cr**
Explores issues relating to the physical, emotional, and social aspects of special significance to women's health across the life span. Within the context of contemporary lifestyle and cultural influences, relevant health information affecting women of all ages, races, and ethnicities is presented. Current trends in the prevention and control of chronic diseases and health disorders as well as practical applications of information and resources to help each student develop a personal wellness plan and the knowledge to become a women's health advocate are emphasized. Successful completion fulfills the Liberal Studies Dimensions of Wellness requirements. Other 143 courses also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicated credit.

KHSS 143 Physical Well-Being **3c-01-3cr**
An overview of personal health and wellness. Emphasis is given to physical dimension in the attainment of well-being. Topical areas include, but are not limited to, exercise and fitness, healthy eating and weight management, substance use and abuse, disease prevention, and sexuality. Also covers stress management and emotional wellness. Guides in the development of an individualized wellness plan to improve overall physical well-being. Successful completion fulfills the Liberal Studies Dimensions of Wellness requirement. Other 143 courses also fulfill this requirement, and any of these courses

may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

KHSS 143 Wellness through Strength Training **3c-01-3cr**
Promotes the attainment of personal well-being through the use of a comprehensive strength training program. Students will focus on the attainment of improved wellness by creating and participating in an exercise regime that focuses on muscular fitness, flexibility, and body composition. The exercise program will utilize a variety of resistive regimes including kettle bells, dumbbell circuits, and plyometrics. Students will evaluate their current level of fitness then participate in a physical activity self-improvement program. Meets Dimensions of Wellness for Liberal Studies requirement. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

KHSS 146 Foundations of Exercise Science **1c-01-1cr**
Examines the historical development of the exercise science field. Focuses on the importance of professionalism, certifications, and credentialing to be successful in the field. Reviews a variety of sub-disciplines, research, and current career opportunities in the field.

KHSS 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.

KHSS 175 Prevention and Care of Injuries to the Physically Active **2c-01-2cr**
Prerequisite: Health and physical education, physical education and sport, athletic coaching certificate students
Presents general information related to the prevention, recognition, and care of both acute and chronic injuries common to participants of physical activity/fitness and athletics. Includes prevention techniques, the classification and staging of injury conditions, and basic evaluation techniques, as well as emergency management and follow-up care procedures.

KHSS 185 Introduction to Athletic Training **3c-01-3cr**
Addresses the historical development of athletic training and the scope of present programs. Introduces the domains and competencies of the athletic training profession.

KHSS 209 Motor Behavior **3c-01-3cr**
Prerequisite: Must be a major enrolled in Kinesiology, Health, and Sport Science Department or instructor permission
Studies the process of human motor behavior across the life span, specifically examining how development of mental and motor abilities affects human movement. Students are required to have appropriate child background clearances.

KHSS 213 Recreational Sports and Lifetime Activities **3c-11-3cr**
Prerequisites: EDSP 102, KHSS 135
Provides exposure to contemporary recreational sports and lifetime physical activities. Includes an overview of all aspects for multiple physical activities, including the history, equipment, fundamental skills and assessment, rules, strategy, and etiquette.

KHSS 214 Teaching Health Fitness and Gymnastics **1c-21-1cr**
Prerequisite: KHSS 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.

KHSS 215 Teaching Rhythmic Activities and Dance **1c-21-1cr**
Prerequisite: KHSS 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.

KHSS 216 Instruction of Fundamental Movement Skills	3c-11-3cr	
Prerequisites: EDSP 102, KHSS 209		
An introduction to instructional methods of fundamental movement categories such as motor skills, manipulative, body management, rhythmic movement, and game skills. Emphasis is on program standards, objectives, and assessments for ages 6-12. An overview of characteristics of children and appropriate activities for this age group. Includes opportunities to improve personal skills, develop units, and teach peers and school-age children. (Titled Teaching Elementary Physical Education before 2015-16.)		
KHSS 217 Teaching Middle School Physical Education	2c-21-2cr	
Prerequisites: EDSP 102, KHSS 142		
An introduction to instructional methods in physical education with an emphasis on program standards, objectives, and assessments for sixth through eighth grades. 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.		
KHSS 218 Instruction of Tactical Skills and Fitness Concepts	3c-11-3cr	
Prerequisites: EDSP 102, KHSS 216		
An introduction to instructional methods in strategic game skills used in many sports and activities with an emphasis on program standards, objectives, and assessments for ages 12-18. Strategies and techniques of instructing personal fitness for adolescents is also be covered. An overview of characteristics of adolescents and appropriate activities for this age group. Includes opportunities to improve personal skills, develop units, and teach adolescents ages 12-18. (Titled Teaching Secondary Physical Education before 2015-16.)		
KHSS 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.		
KHSS 225 Social Issues in Sport	3c-01-3cr	
Sport is a topic that permeates virtually all aspects of society. Investigates sport from historical, philosophical, and social perspectives. Various social theories are used to examine the interaction of sport and society through exploration of issues related to business, deviance, disability, gender, media, social class, politics, and race as they pertain to sport.		
KHSS 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.		
KHSS 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.		
KHSS 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.		
KHSS 256 Applied Human Structure and Conditioning	3c-01-3cr	
Prerequisite: Physical education and sport/sport administration major		
The emphasis is on developing an anatomical and physiological knowledge base as it applies to exercise, conditioning, and training of the physically active. Specific body systems presented include skeletal, muscular, cardio-respiratory, and nervous. Components of each system are addressed as they		
		pertain to exercise and training concepts, such as speed, strength, muscular and cardiovascular endurance, flexibility, aerobic capacity, power, and other physiological factors related to performance and physical activity.
KHSS 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 on proper body mechanics and teaching progressions. Students have opportunity to earn American Red Cross Water Safety Instructor certification upon successful completion of requirements.		
KHSS 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.		
KHSS 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.		
KHSS 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.		
KHSS 285 Group/Individual Exercise Leadership	1c-21-3cr	
Prerequisites: Physical education and sport/exercise science majors, KHSS 221 with a grade of "C" or better, or BIOL 150 with a grade C or better		
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.		
KHSS 286 Personal Training Practicum	2c-11-3cr	
Prerequisite: KHSS 221 or BIOL 150		
Provides theoretical knowledge of leadership skills necessary to design, implement, and evaluate safe and effective personal training programs. Requires networking within the field as well as opportunities to apply introductory concepts of exercise training and business development through practical application.		
KHSS 292 Introduction to Sport Management	3c-01-3cr	
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 to sport marketing, sport finance, and sport law is provided.		
KHSS 315 Biomechanics	3c-01-3cr	
Prerequisite: A grade of "C" or better in KHSS 221 or a grade of "C" or better in BIOL 150		
A study of the relationship between mechanical and physical principles and human movement.		
KHSS 316 Instruction of Child Health Concepts	3c-01-3cr	
Prerequisites: EDSP 102, KHSS 142		
Introduces the theories of instruction and methods for teaching health education to elementary school-aged children. Identifies developmentally appropriate teaching methods and activities, reviews and assesses current health curriculum, and demonstrates the use of technology in the instructional setting. Provides opportunities for observation, lesson planning, and teaching of health education to children. (Titled Teaching Elementary Health Education before 2015-16.)		

- KHSS 318 Preprofessional Experience I** **3c-01-3cr**
Prerequisites: KHSS 209, 216, health and physical education majors only
 Students assist a university faculty member teach in several instructional settings, including elementary school physical education program or community-based wellness programs. Students have the opportunity to apply pedagogical theory and concepts related to various professional areas. Emphasis is on planning, developing, implementing, and assessing educational experiences.
- KHSS 319 Field Practicum I** **3c-01-3cr**
Prerequisite: Sophomore status
 An initial experience in the professional work setting. Combines classroom theory with practical application through job-related experience to build on professional knowledge and skills. (Titled Preprofessional Experience II before 2016-17.)
- KHSS 320 Managing Facilities and Events in Sport** **3c-01-3cr**
 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.
- KHSS 325 School and Community Health** **3c-01-3cr**
 Introduces the role of school and community in protecting and promoting the health of its members. Topics include 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.
- KHSS 330 Assessment in Physical Education** **0c-21-1cr**
Prerequisite: Health and physical education 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.
- KHSS 333 Psychology of Coaching** **3c-01-3cr**
 Emphasizes the interaction between sport psychology and coaching strategies. Includes history of sports psychology, motivating athletes, coaching various personality types, and controlling emotions and stress in athletes. Focuses on the impact of social influence, group dynamics, and character development on sport performance. Examines aggression in sport as well as gender differences and cultural diversity issues.
- KHSS 335 Athletic Coaching** **3c-01-3cr**
 Emphasizes coaching strategies and techniques for all sports. Includes coaching philosophy and style, motivating athletes and managing their behavior, teaching technical and tactical skills, and planning an approach to games and practices. Focuses on conditioning techniques, proper nutrition, and drug and alcohol prevention in athletes. The administration of the team, parents, referees, and liability risks is stressed. Examines aggression in sport, gender differences, cultural diversity issues, and the use of sport psychology strategies.
- KHSS 341 Evaluation in Health and Physical Education** **3c-01-3cr**
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.
- KHSS 343 Physiology of Exercise** **3c-01-3cr**
Prerequisites: Health and physical education, physical education and sport/exercise science, athletic training majors and a grade of "C" or better in KHSS 221 or C or higher in BIOL 150
 Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue.
- KHSS 344 Adapted Physical Activity and Sport** **3c-01-3cr**
Prerequisites: KHSS 209 and one of the following: KHSS 221, 256, or BIOL 150
 Recognition of structural deviations, corrective exercises, physical activity, and sport for individuals with a wide range of disabilities
- KHSS 345 Survey of Orthopedic Injuries in Sport and Exercise** **3c-01-3cr**
Prerequisites: Grades of "C" or better in KHSS 221 or BIOL 150, and KHSS 185
 A survey of common musculoskeletal injuries associated with participation in athletic activities, with emphasis on etiology, pathophysiology, and classification. General injury assessment and management procedures are also presented.
- KHSS 346 Preventive and Acute Care Skills in Athletic Training** **0c-21-1cr**
Corequisite: KHSS 345
 Develops essential athletic training skills for the beginning and intermediate athletic training student. Emphasizes athletic taping and wrapping, open and closed wound care, vital signs and anthropometric measurements, immobilization and ambulation devices, protective equipment fitting, and transportation and transfer of the injured athlete.
- KHSS 347 Physiology of Exercise Laboratory** **0c-21-1cr**
Corequisite: KHSS 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 KHSS 343.
- KHSS 349 Applied Pediatric Exercise Lab** **0c-21-1cr**
Prerequisite: KHSS 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.
- KHSS 350 Health Aspects of Aging** **3c-01-3cr**
Prerequisites: PSYC 101, SOC 151 or 161, 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.
- KHSS 351 Managing Budgets and Technology in Sport** **3c-01-3cr**
Prerequisites: KHSS 292, ECON 121, 122
 Provides information concerning the application of finance and accounting principles to managerial control of sport organizations. Examines current economic and financial issues that impact the sports industry. Topics include budget development, funding, capital projects, financial analysis, licensing, and economic impact studies related specifically to managing sport. Emphasizes specific software packages currently being used to manage sport organizations.
- KHSS 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.
- KHSS 354 Application of Driver Education Instructional Modes** **2c-21-3cr**
Prerequisites: KHSS 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.

KHSS 365 Orthopedic Injury Assessment in Athletic Training 3c-2l-4cr

Prerequisites: KHSS 345, 346

Teaches assessment procedures, evaluation methods, and proper athletic training protocol for neuromuscular and musculoskeletal injuries. In addition, administrative issues in athletic training are addressed emphasizing accurate medical documentation. Emphasizes subjective and objective assessment and documentation of findings.

KHSS 370 Adapted Health and Physical Education 3c-0l-3cr

Prerequisites: EDSP 102, KHSS 209; at least one of the following: KHSS 214, 215, 216, 217, 218, 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.

KHSS 375 Physiological Basis of Strength Training and Conditioning 3c-0l-3cr

Prerequisite: Grade of "C" or higher in KHSS 221 or BIOL 150

Provides the anatomical and physiological basis of muscle function. Students also gain an understanding of changes that can be made through strength training and conditioning, along with knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment are available.

KHSS 376 Athletic Training Clinical Practicum I 0c-3l-3cr

Prerequisites: KHSS 345, 346

Develops and demonstrates proficient psychomotor skills within the domains of athletic injury prevention and acute care, in coordination with a one-semester clinical field experience. Allows an opportunity to practice and apply skills taught under the direction of a preceptor within the IUP Athletic Department or an affiliated clinical site. Emphasizes specific skills such as 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 eligibility to sit for the Board of Certification (BOC) for the Athletic Trainer examination.

KHSS 377 Athletic Training Clinical Practicum II 0c-3l-3cr

Prerequisites: KHSS 365

Develops and demonstrates proficient psychomotor skills within the domain of athletic injury assessment, in coordination with a one-semester clinical field experience. Allows an opportunity to practice and apply skills taught under the direction of a preceptor within the IUP Athletic Department or an affiliated clinical site. Emphasizes specific skills such as those relating to anatomical landmarks' identification, orthopedic evaluations, and neurological evaluations. Restricted to students seeking eligibility to sit for the Board of Certification (BOC) for the Athletic Trainer examination.

KHSS 380 Organization and Administration in Athletic Training 3c-0l-3cr

Prerequisite: KHSS 345 or instructor permission

Presents comprehensive instruction in such areas as health care administration; program, human, information, and resource management; and ethics and legal considerations in athletic training.

KHSS 385 General Medical Conditions in Athletic Training 2c-2l-3cr

Prerequisite: KHSS 345 or instructor permission

An overview of general health assessment and physical examination techniques related to the athletic population. 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.

KHSS 410 Exercise Prescription 3c-0l-3cr

Prerequisites: Physical education and sport/exercise science majors and KHSS 343 with a grade of "C" or better

Teaches individuals to write exercise prescriptions based on 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.

KHSS 411 Physical Fitness Appraisal 3c-0l-3cr

Prerequisite: KHSS 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.

KHSS 412 Physical Activity and Stress Management 3c-0l-3cr

Acquisition of necessary understanding of anxiety and stress, their nature, place in society, and intervention strategies as they relate to physical activity.

KHSS 413 Physical Activity and Aging 3c-0l-3cr

Prerequisite: KHSS 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.

KHSS 414 Exercise Electrocardiography 1c-1l-3cr

Prerequisites: Physical education and sport/exercise science majors and KHSS 343 with a grade of "C" or better

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 are also interpreted.

KHSS 415 Lifestyle Behavior Management for Physical Activity 3c-0l-3cr

Prerequisites: KHSS 343 with a grade of "C" or better

Examines a variety of strategies necessary to modify health behavior with an emphasis on physical activity. Focus is placed on development of skills necessary to work with clients/patients in group leadership and group-process activities to assess and assist with behavior change for both the apparently healthy and those with multifaceted chronic disease as it relates to physical activity.

KHSS 416 Functional Training for Strength and Conditioning 3c-0l-3cr

Prerequisites: KHSS 343 and 375 with a grade of "C" or better

Focuses on comparing and contrasting the scientific principles associated with traditional strength training and functional strength training techniques. Examines a variety of new techniques found in the fitness and sport performance industry and provides practical experience in both traditional and functional strength training techniques.

KHSS 417 Contemporary Issues in School and Community Health 3c-0l-3cr

Provides pedagogical strategies relevant to educators in school and community health education settings. Assist students in identifying, analyzing, promoting, and evaluating recent developments and issues in health.

KHSS 420 Health Education and Promotion at the Workplace 3c-0l-3cr

Prerequisite: KHSS 325 or instructor permission

Addresses basic issues and problems in planning, implementing, and evaluating health education programming in a variety of school and worksite settings. Explores agencies and programs focused on advocacy of health education services. Emphasizes knowledge and practical skills required to become a certified health education specialist.

KHSS 426 Health Science Instruction	3c-01-3cr	KHSS 465 Sport Management Capstone	3c-01-3cr
Prerequisites: KHSS 316, 318		Prerequisites: KHSS 292, 320; 90cr completed	
An overview of health curriculum with a focus on teaching methods and media of instruction. Includes unit development, opportunities for instruction, and guidelines for maintaining professional growth. Explores current research in teaching techniques, motivational strategies, and assessment of learning within a diverse population.		The emphasis is on improving personal effectiveness in the work environment for sport managers. Students develop observational skills and survey techniques needed for the sport industry. Thinking critically, problem solving, and applying transformative change models are emphasized. Discipline-specific research articles are examined and critiqued. Prepares students to market their skills to the sport industry.	
KHSS 437 Coaching Disability Sport	3c-01-3cr	KHSS 472 Epidemiology of Physical Activity	3c-01-3cr
Prerequisite: KHSS 209 or instructor permission		Prerequisite: BIOL 301	
Introduces developmentally appropriate practice when coaching individuals with disabilities. Emphasizes accessible and inclusive practices that promote full participation of individuals with various disabling conditions. Explores program planning and assessment in various disability sports and games. (Offered as KHSS 337 before 2016-17.)		Covers physical activity epidemiology from the evidence of the relationship between physical activity and chronic disease and the assessment of physical activity and/or sedentary behavior. Explores individual and population-based lifestyle intervention efforts to enhance health behavior and promote disease prevention in diverse populations.	
KHSS 441 Psychosocial Implications for Health and Physical Education	3c-01-3cr	KHSS 476 Athletic Training Clinical Practicum III	0c-3l-3cr
Prerequisite: Senior standing		Prerequisites: KHSS 365, 385, 446	
A study of psychological and sociological influences, both theoretical and empirical, and their effects on health and physical performance.		Develops and demonstrates proficient psychomotor skills within the domains of athletic training organization/administration and education/guidance, in coordination with a one-semester clinical field experience. Allows an opportunity to practice and apply skills under the direction of a preceptor within the IUP Athletic Department or an affiliated clinical site. Emphasizes specific skills such as those relating to communication, recordkeeping, 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 eligibility to sit for the Board of Certification (BOC) for the Athletic Trainer examination.	
KHSS 442 Senior Seminar: Professional Development in Health, Physical Education, and Sport	3c-01-3cr	KHSS 477 Athletic Training Clinical Practicum IV	0c-3l-3cr
Prerequisite: 90cr completed		Prerequisites: KHSS 446, 448	
For majors of health and physical education and 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.		Develops and demonstrates proficient psychomotor skills within the domain of athletic injury rehabilitation, in coordination with a one-semester clinical field experience. Allows an opportunity to practice and apply skills under the direction of a preceptor within the IUP Athletic Department or an affiliated clinical site. Emphasizes specific skills such as exercise, manual therapy, and other advanced musculoskeletal screening and therapeutic intervention techniques. Restricted to students seeking eligibility to sit for the Board of Certification (BOC) for the Athletic Trainer examination.	
KHSS 445 Business Practices in Sport	3c-01-3cr	KHSS 480 Professional Issues in Athletic Training	3c-01-3cr
Prerequisites: KHSS 292, 320		Prerequisites: KHSS 380, 476	
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.		Explores topics related to professional development and responsibility in athletic training. Examines current research findings in athletic training. Addresses preparation for the Board of Certification (BOC) examination.	
KHSS 446 Therapeutic Modalities	3c-2l-4cr	KHSS 481 Special Topics	var-1-3cr
Prerequisite: KHSS 365		Prerequisite: As appropriate to course content	
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.		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.	
KHSS 448 Therapeutic Exercises for Athletic Injury Management	3c-2l-4cr	KHSS 482 Independent Study	var-1-3cr
Prerequisites: KHSS 365, 375		Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
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 development of skill in basic therapeutic exercise procedures for improving muscle performance, relaxation, and mobilization are included.		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.	
KHSS 450 Curriculum and Programming in Sexuality Education	3c-01-3cr	KHSS 492 Health Fitness Instruction	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.		Prerequisites: Physical education and sport/exercise science majors only. Grade of "C" or better in all of the following: KHSS 285, 286, 315, 343, 375, and either KHSS 410 or 411. May only take KHSS 410 or 411 concurrently with 492.	
KHSS 460 Law and Issues in Managing Sport	3c-01-3cr	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	
Prerequisite: KHSS 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. The evolution of NCAA compliance and the issues that social media has on managing sport are included.			

of functional anatomy and exercise physiology are also expected before participation in the class.

KHSS 493 Internship **var-3-12cr**

Prerequisites: Physical education and sport/exercise science, physical education and sport/sport administration, and athletic training majors, senior status or permission.

Integrates classroom experience with practical experience in community service agencies or industrial, business, or governmental organizations. Senior standing required.

KORE: Korean
Department of Foreign Languages
College of Humanities and Social Sciences

KORE 101 Elementary Korean I **4c-01-4cr**

For beginning students. Introduces the Korean language, with attention focused on three modes of communication in present and past time frames: interpretive listening and reading, interpersonal speaking and writing, and presentational speaking and writing. Also imparts knowledge of Korean culture and society. Attendance is required. Students may not register for or take a D/F repeat in KORE 101 when credit has already been received for a higher numbered Korean course.

KORE 102 Elementary Korean II **4c-01-4cr**

Prerequisite: KORE 101

A continuation of KORE 101. Focuses on communication through listening, speaking, reading, and writing. Students continue to learn to identify and write Korean characters. Builds on the three modes of communication—interpretive, interpersonal, and presentational—to build proficiency in using the Korean language in real-life situations. Also imparts knowledge of Korean culture and society. May not register for or take a D/F repeat in KORE 102 when credit has already been received for a higher-numbered KORE course.

KORE 201 Intermediate Korean **4c-01-4cr**

Prerequisite: KORE 102

A continuation of KORE 102. Focuses on communication through listening, speaking, reading, and writing. Students continue to learn to identify and write complicated Korean vowels and consonants. Builds on the three modes of communication—interpretive, interpersonal, and presentational—to build proficiency in using the Korean language in real-life situations. Also imparts knowledge of Korean culture and society. Attendance is required. Students may not register for or take a D/F repeat in KORE 201 when credit has already been received for a higher-numbered KORE course.

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 350 The Mayas: Culture, Literature, and Numbers **3c-01-3cr**

Explores the world of the ancient and modern Mayan civilization, developing student understanding of a culture that differs from modern society. Through discussion of and hands-on activities involving Mayan geography, religion, calendar, mathematics, food, writing, and literature, students develop an appreciation of the dimensions of Mayan culture, enabling them to make generalizations about modern cultural development.

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 Latin American studies 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.

LDSP: Leadership Studies
Eberly College of Business and Information Technology
and College of Humanities and Social Sciences

LDSP 361 Foundations of Leadership **3c-01-3cr**

Introduces leadership by focusing on what it means to be a good leader and explores the practice and interplay of leadership with effective teamwork and communication. Examines topics such as the definition and nature of leadership, modern leadership theories, recognizing leadership/team traits, developing leadership/team skills, creating a vision, setting the tone, listening to team and out-group members, handling conflict, overcoming obstacles, and addressing ethics in leadership. Special attention is given to helping students understand and improve their own leadership performance. (Offered as LDSP 300 before 2017-18.)

LGBT: Lesbian, Gay, Bisexual, Transgender, and Queer Studies
College of Humanities and Social Sciences

LGBT 200 Introduction to Lesbian, Gay, Bisexual, Transgender, and Queer Studies **3c-01-3cr**

Introduces students to lesbian, gay, bisexual, transgender, and queer (LGBT&Q) studies as an interdisciplinary academic field; draws substantially on sociology, psychology, history, politics, religion; considers literary and media representations of the LGBT&Q populations and experiences. Focuses on the exploration of the cultural, social, historical, and political understandings of sexuality and gender marginality that have shaped identities in modern times. Addresses contemporary issues related to LGBT&Q individuals and communities and critically examines the meaning and representation of heterosexuality and gender normativity in relation to LGBT&Q experiences. Considers key intersections of sexual orientations, identities, and behaviors in relation to age, race, ethnicity, and social class.

LGBT 400 Queer Theory **3c-01-3cr**

Familiarizes students with the scholarship and theories surrounding sexualities, sexual identities, and gender identities. Examines the literature and evidence on the ways in which social forces influence sexualities and gender (orientation, identity) as well as performance (how we humans act out our sexuality). Analyzes literatures on the diversity of non-hegemonic desires, behaviors, orientations, identities, and communities and related issues from a trans-historical, cross-cultural, and interdisciplinary perspective. Explores the ways human sexualities and gender identities are themselves social forces as societies respond to sexual variations in terms of identities such as gay, lesbian, bisexual, transgender, queer, questioning, and a range of heterosexualities.

LIBR: Library
The University Libraries
Academic Affairs Division

LIBR 151 Introduction to Information Literacy **1c-01-1cr**

Information literacy is the ability to locate, evaluate, and use information effectively. These skills are essential to students while in college but also for success in their personal and professional lives after they have graduated. Students explore online, print, and non-print information resources and hone their information-seeking skills and knowledge as they relate to critical thinking, resource analysis, and the ethical and appropriate use of information and develop a base level of information literacy skills. (Titled Introduction to Library Resources before 2014-15.)

LIBR 152 Information Issues and Resources for the Health Sciences 3c-01-1cr

Prerequisite: Enrollment in one of the following programs: nursing and allied health professions; food and nutrition; kinesiology, health, and sport science; or public health

An in-depth look at how information is located and used in the health sciences, including a variety of traditional and non-traditional resources, as well as the cost of that information, the availability of misinformation, evaluation techniques for evidence-based practice, and the role of the Institutional Review Board (IRB) in health sciences research.

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/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.

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 a mathematical way of analyzing problems; develops an appreciation for the nature, breadth, and power of mathematics and its role in a technological society; introduces useful mathematics or mathematics related to student interests. 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.

Teaches students to appropriately analyze and interpret numerical, graphical, and algebraic representations to enable them to model complex situations using mathematical structures and increase their problem-solving skills. Particular focus is given to polynomial, exponential, and logarithmic functions in order to prepare students for further study in business calculus and/or statistics.

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 calculus (limit, derivative, and integral). Applications to business and economics are emphasized.

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 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, application of derivative, integrals, and applications of the integral. (Trigonometric, exponential, and logarithmic functions are included.)

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.)

MATH 151 Elements of Mathematics I 3c-01-3cr

Prerequisite: Appropriate major: special education, speech and language pathology, deaf education, family and consumer sciences education, art education, child development and family relations, middle-level education 4-8, or early childhood education/special education.

Topics included are 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	MATH 272 Introduction to Mathematical Proofs II	3c-01-3cr
Prerequisite: MATH 151		Prerequisites: MATH 126 and 271 with a grade of “C” or better	
Topics included are organizing and analyzing data, statistics, probability, geometric shapes, measurement, congruence and similarity, coordinate geometry, and transformational geometry.		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 153 Elements of Algebra	3c-01-3cr	MATH 281 Special Topics	var-1-3cr
Prerequisite: MATH 151		Prerequisite: As appropriate to course content	
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 are made with the teaching and learning of algebraic concepts in the elementary and middle schools.		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 171 Introduction to Linear Algebra	3c-01-3cr	MATH 309 Discrete Mathematics	3c-01-3cr
An introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.		Prerequisites: COSC 110 and MATH 121 or 125	
MATH 214 Probability and Statistics for Business Majors	3c-01-3cr	Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these 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. (Offered as MATH 219 before 2016-17.)	
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 317 Probability and Statistics for Elementary/Middle-Level Teachers	3c-01-3cr
MATH 216 Probability and Statistics for Natural Sciences	3c-01-3cr	Prerequisite: MATH 152	
Prerequisite: MATH 121 or 125		Introduces concepts of probability and statistics by exploring and discovering key ideas related to data analysis and making predictions. Appropriate technology is incorporated. Explores curricular materials, resources, and activities relevant to teaching diverse groups at the elementary/middle level.	
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 320 Mathematics for Early Childhood	3c-01-3cr
MATH 217 Probability and Statistics	3c-01-3cr	Prerequisites: MATH 152, ECED 200	
Prerequisite: For non-mathematics majors		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.	
Frequency distributions, measures of central tendency and variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression. Emphasis is on applications in the social sciences using appropriate technology, as opposed to theoretical development of topics.		MATH 330 Teaching Mathematics in the Elementary School	3c-01-3cr
MATH 225 Calculus III/Physics, Chemistry, Mathematics	3c-01-3cr	Prerequisites: MATH 152, ECED 280	
Prerequisite: MATH 126 or the equivalent		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.	
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.)		MATH 340 Principles of Secondary School Mathematics	3c-01-3cr
MATH 250 Introduction to Numerical Methods	3c-01-3cr	Prerequisite: MATH 271	
Prerequisites: COSC 110, MATH 121 or 125		Provides students with mathematics content and mathematical thinking they need to teach in secondary schools, as well as to connect the content learned in college mathematics courses with the secondary curriculum. Open to secondary mathematics education majors only.	
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/F repeats but may not be counted for duplicate credit.		MATH 341 Differential Equations	3c-01-3cr
MATH 271 Introduction to Mathematical Proofs I	3c-01-3cr	Prerequisite: MATH 122 or 126	
Prerequisites: MATH 121 or 125; 171		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. (Offered as MATH 241 before 2016-17.)	
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 342 Advanced Mathematics for Applications	4c-01-4cr
		Prerequisites: MATH 122 or 225; 341	
		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	Emphasizes the applied aspects of these models. Computer software is used for data analysis.
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 17th 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	MATH 417 Statistical Applications 3c-01-3cr
Prerequisite: MATH 271 with a grade of "C" or better		Prerequisite: MATH 214 or 216 or 217 (for non-mathematics majors)
Divisibility, congruences, primitive roots, number theoretic functions, Diophantine equations, continued fractions, quadratic residues.		
MATH 355 Foundations of Geometry I	3c-01-3cr	Using computer programs, a wide array of statistical procedures for educational research workers is 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.
Prerequisites: MATH 171, 271 with grades 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	MATH 418 Sampling Survey Theory and Its Application 3c-01-3cr
Prerequisites: MATH 216; 225 (may be taken concurrently)		Prerequisite: (For non-mathematics majors) MATH 214 or 216 or 217
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	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.
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 371 Linear Algebra	3c-01-3cr	MATH 420 Patterns and Functions for Elementary/Middle-Level Teachers 3c-01-3cr
Prerequisites: MATH 171, 271 with a grade of "C" or better		Prerequisite: MATH 152
Vector spaces and linear transformations are studied in a theoretical setting. Also, canonical forms and multilinear algebra are studied.		
MATH 411 Univariate Data Analysis	3c-01-3cr	Examines and develops expertise with sequences, patterns, and functions, including linear, quadratic, logarithmic, exponential, and trigonometric functions. Appropriate technology is incorporated. Explores curricular materials, resources, and activities relevant to teaching diverse groups at the elementary/middle level.
Prerequisite: MATH 214 or 216 or 217 or instructor permission		
An applied statistics course in descriptive statistics, statistical inference procedures, regression analysis, analysis of variance, and analysis of deviance. Inference procedures for population means and proportions are developed. Simple linear regression, multiple linear regression, one-way ANOVA, two-way ANOVA, Poisson regression, and logistic regression models are used to analyze data. Emphasizes the applied aspects of these statistical models and uses computer software for data analysis.		
MATH 412 Multivariate Statistics	3c-01-3cr	MATH 421 Advanced Calculus I 3c-01-3cr
Prerequisite: MATH 214 or 216 or 217 or instructor permission		Prerequisite: MATH 272 with a grade of "C" or better
An applied statistics course that focus on multivariate statistical methods. Research procedures on the relationship among variables, significance of group differences, prediction of group membership, and structure exploration are introduced. Factorial analysis of variance, analysis of covariances, multivariate analysis of variance and covariance, path analysis, factor analysis, and discriminate analysis are introduced and used to analyze data. Emphasizes the applied aspects of these statistical methods and uses computer software for data analysis.		
MATH 413 Methods of Teaching Mathematics at the Middle Level	3c-01-3cr	A study of set theory, real number system, functions, topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.
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 416 Time Series Analysis	3c-01-3cr	MATH 422 Advanced Calculus II 3c-01-3cr
Prerequisite: MATH 363 or 411 or ECON 356 or instructor permission		Prerequisite: MATH 421
Applied statistics course in the analysis and forecasting of time series data. Linear time series regression models, ARIMA models, SARIMA models, GARCH models, and spectral theory are used to examine time series data.		
		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 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
		Prerequisite or Corequisite: EDUC 242
		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 before 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 448 Introduction to Financial Mathematics 3c-01-3cr

Prerequisites: MATH 115 or 125 or 121; and MATH 214 or 216 or 217

A rigorous mathematical treatment of the theory associated with financial transactions is undertaken. Geometric series and other concepts are used to construct mathematical models for analytically pricing various financial securities based on the time value of money. Studies how to construct mathematical models for pricing cash flows and explores the equivalency of different cash flows. Includes a detailed study of interest theory and financial economics. Prepares students for the Society of Actuaries Financial Mathematics (FM) exam.

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 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

Prerequisites: COSC 110 or 108, junior status, mathematics education major or instructor permission, and completion of EDUC 242 with grade of "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 on the integration of pedagogy and subject matter knowledge. Must be taken within two semesters before 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 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

Continues 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 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 mathematics 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 that 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 105 Introduction to Business **3c-01-3cr**

An introduction to business, emphasizing critical issues affecting the business world, such as globalization, technology, ethics, and diversity. An overview of the various functional areas of business, it 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. (Offered as BTST 105 before 2014-15.)

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 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 selec-

tion, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

MGMT 310 Principles of Management **3c-01-3cr**

Provides 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**

Prerequisite: 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. 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 on the management problems stemming from the movement of goods, human resources, technology, finance, or ownership across international boundaries. (Also offered as MKTG 350.)

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: 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 that 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 428 Seminar in Management 3c-0l-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-0l-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-0l-3cr
Prerequisite: MATH 214

Emphasizes the philosophy that quality is an organization-wide 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-0l-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 440 Introduction to Energy Management 3c-0l-3cr
Prerequisite: Junior standing

Introduction to the global energy markets and business with a particular emphasis on hydrocarbon based resources including petroleum, natural gas, and coal resources. Also includes exposure to nuclear, hydroelectric, solar, wind, and other "alternative" energy technologies.

MGMT 451 International Management 3c-0l-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-0l-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-3l-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-0l-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 461 Business Leadership Theory 3c-0l-3cr
Prerequisite: Junior standing or instructor permission

Introduces the various leadership styles such as autocratic, laissez-faire, transformational, transactional, visionary, and others as they relate to today's global business/corporate environment. These styles and their effectiveness as well as examples of application are discussed.

MGMT 462 Applied Business Leadership Skills 3c-0l-3cr

Prerequisites: Junior standing, MGMT 461 or instructor permission
Focuses on current leadership styles and applications in business. The effectiveness of these styles is critically examined and evaluated with a cross-culture emphasis. Advanced, innovative, and exploratory business leadership topics and their effect on the behavior of employees, cooperation, and productivity are discussed.

MGMT 472 Organizational Entrepreneurship 3c-0l-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 3cr

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost
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-0l-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 Communications

MIDL 221 Literature for Middle Level 3c-01-3cr

Prerequisite: Admission into Teacher Education Step 1
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

Prerequisites: Admission into Teacher Education Step 1; middle-level education 4-8 major
Provides preservice teachers with various strategies, techniques, and materials related to teaching reading in grades 4 through 8. Current research and practical applications are 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

Prerequisites: Admission into Teacher Education Step 1; middle-level education 4-8 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 is evidenced through the development of lesson and unit plans that 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 middle-level education 4-8 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 21st-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 majors in 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.

MIDL 425 Methods of Teaching Language Arts in Grades 4-8 3c-01-3cr

Prerequisite: MIDL 222 with a grade of "C" or better
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 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.

MKTG 350 International Business 3c-01-3cr
Prerequisite: 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 on 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.)

MKTG 351 Self-Marketing 1c-01-1cr
Prerequisite: 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 to prepare students to seek internship experience.

MKTG 420 Marketing Management	3c-01-3cr	MKTG 440 Direct Marketing	3c-01-3cr
Prerequisites: MKTG 320, 321, junior standing		Prerequisite: MKTG 320	
An analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a total marketing program.		An introduction to the role and nature of direct marketing, including its current theory and practice. Topics include designing and implementing direct mail marketing, telemarketing, catalog marketing, e-mail marketing and Web/Internet based direct marketing for consumer and industrial markets. Case studies and applications are utilized. Social, public policy, and legal issues in direct marketing are also explored.	
MKTG 421 Marketing Research	3c-01-3cr	MKTG 441 Export Marketing	3c-01-3cr
Prerequisites: MKTG 320, MATH 214		Prerequisite: MKTG 320	
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.		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.	
MKTG 430 International Marketing	3c-01-3cr	MKTG 442 Social Cause Marketing for Nonprofit Organizations	3c-01-3cr
Prerequisite: MKTG 320		Prerequisite: MKTG 320 or instructor permission	
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.		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.	
MKTG 431 Business-to-Business Marketing	3c-01-3cr	MKTG 443 New Product Design and Branding	3c-01-3cr
Prerequisite: MKTG 320		Prerequisite: MKTG 320	
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.		Discusses the new product design, development, branding, and launch process companies use to bring a new concept to market by satisfying customers' 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.	
MKTG 433 Advertising	3c-01-3cr	MKTG 444 Green Marketing	3c-01-3cr
Prerequisite: MKTG 320		Prerequisite: 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.		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 434 Marketing Logistics	3c-01-3cr	MKTG 445 Social Media Marketing	3c-01-3cr
Prerequisites: Junior/senior standing, MKTG 320, MGMT 330		Prerequisite: MKTG 320 or equivalent	
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.		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 435 Professional Selling and Sales Management	3c-01-3cr	MKTG 446 Marketing Ethics	3c-01-3cr
Prerequisite: MKTG 320		Prerequisite: MKTG 320	
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.		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 436 Retail Management	3c-01-3cr	MKTG 448 Brand Design	1.5c-2l-3cr
Prerequisite: MKTG 320, junior standing		Prerequisite: MKTG 320	
Introduces students to all facets of retailing, including the history of retailing, retail theories, and decision making in retailing framework.		An integrated study of branding concepts in marketing and art, including aesthetics in commercial art, design of brand and corporate identity trademarks, theories of brand marketing and business strategy, customer touchpoints in brand communication and branding as a corporate strategy. (Also offered as ART 448; may not be taken for duplicate credit.)	
MKTG 437 Services Marketing	3c-01-3cr	MKTG 450 Marketing Strategy	3c-01-3cr
Prerequisite: MKTG 320		Prerequisite: MKTG 320; senior standing	
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.		Develops marketing and business decision-making skills to evaluate real-world business situations, analyzes marketing problems and scenarios, and produces solutions in the form of marketing and business strategies. Involves analyses based on quantification of marketing decisions and	
MKTG 439 Internet Marketing	3c-01-3cr		
Prerequisite: 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.			

problem-solving scenarios using exercises and in-depth case studies that develop analytical reasoning. This senior-level course integrates knowledge of marketing and other business management functions into marketing strategy development, implementation, and control using either a marketing plan or marketing simulation exercises. Readings on classic and emerging issues provide applied perspectives of marketing in the business environment.

MKTG 481 Special Topics **var-I-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 Office of the Provost. 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 skill, 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-3I-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 that 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 teamwork 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-0I-3cr**

A broad introduction to the technical, artistic, historical, social, and cultural dimensions of music, drawing on musical traditions from around the world. Students learn to recognize basic ways in which music is put together, communicates meaning to its listeners, and enriches many aspects of life. Through attendance at concerts, students gain familiarity with musical events in their community.

MUHI 102 Music and Literature Survey **3c-0I-3cr**
Prerequisite: Music major or instructor permission

An introduction 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

works by women and works from nonwestern musical traditions. For music majors and other who have a substantial knowledge of music, this course fulfills both the Liberal Studies Fine Arts and Humanities Literature requirement for music majors.

MUHI 114 Analysis of Popular Music **3c-0l-3cr**

Introduces active listening and the materials of Western music via contemporary popular repertoire. Covers notation, basic pitch, and rhythm constructs, and analysis with and without score, as well as aspects of songwriting, production, and recording.

MUHI 222 Music of the British Invasion **3c-0l-3cr**

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.

MUHI 223 Musical Cultures from Around the World **3c-0l-3cr**

Explores a variety of world cultures through their music. Focuses on music as a product and reflection of culture as well as an aesthetic art form. Introduces the basic elements of music, identifies the musical styles of different cultures, and analyzes how music communicates and reflects cultural values which enrich the lives of people in these communities. Provides concert attendance opportunities to gain familiarity with musical events in communities and reflect on the role of the individual in these musical culture.

MUHI 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.

MUHI 301 Music History I **3c-0l-3cr**

Prerequisites: MUHI 102, ENGL 101, 202, HIST 196 or 197 or 198

Survey of the musicians, cultural settings, aesthetics, musical styles, and repertoires of Western Europe from Antiquity to the late 18th century. Introduces research methods in music history.

MUHI 302 Music History II **3c-0l-3cr**

Prerequisites: MUHI 102, ENGL 101, 202, HIST 196 or 197 or 198

Survey of the musicians, cultural settings, aesthetics, musical styles, and repertoires of Europe and the United States from the late 18th century to the present. Also focuses on developing research writing skill in music history.

MUHI 333 History of Popular Music Since 1945 **3c-0l-3cr**

Survey of the musical figures, styles, and cultures of popular music in the US and the UK since 1945.

MUHI 420 The 20th Century **3c-0l-3cr**

Prerequisites: 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.

MUHI 421 Topics in American Music **3c-0l-3cr**

Prerequisites: MUHI 301, 302

Emphasizes reading, discussion, and writing on specialized topics in the history of American music. The topic varies from semester to semester and are announced before registration. Addresses such topics as Art Music in American Culture, Music and the Moving Image, Popular Music, Music and Drama, or Virtuoso Performers in America.

MUHI 425 19th-Century Music **3c-0l-3cr**

Prerequisites: MUHI 301, 302

Examines the musical and historical aspects of some representative works in four significant repertoires of 19th-century music: songs, characteristic works for piano, opera, and symphonies. Further examines how the works intersect with a number of social, cultural, aesthetic, political, and economic themes that pervade the century, such as the rise of the middle class, city cultures, the domestic music market, the invention of “the folk,” national-

ism and exoticism, social and political revolutions, idealism and its successors, and the virtuoso.

MUSC: Music
Department of Music
College of Fine Arts

MUSC 110 Fundamentals of Theory **3c-0l-3cr**

Rudiments of materials; harmonic, melodic, rhythmic, and basic formal procedures of the common practice period including pitch reading, interval construction, scales, and modes.

MUSC 111 Theory Skills I **0c-3l-2cr**

Prerequisite: Music major or instructor permission

Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I.

MUSC 112 Theory Skills II **0c-3l-2cr**

Prerequisite: 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.

MUSC 113 Theory I Practicum **0c-0l-1cr**

Prerequisite: Music major or instructor permission

Corequisite: MUSC 115

Reinforces the core concepts of MUSC 115 via recitation, written course work, guided listening, and musicianship drills. Any student who enrolls Theory I may also register for the practicum. Students who fail the departmental theory placement exam must complete the course.

MUSC 115 Theory I **3c-0l-3cr**

Prerequisite: Music major or instructor permission; concurrent

enrollment in MUSC 113 or score of at least 70 percent on the departmental theory placement exam

The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through seventh chords.

MUSC 116 Theory II **3c-0l-3cr**

Prerequisite: 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.

MUSC 120 Brass Ensemble **0c-2l-0/1cr**

Prerequisite: Music major or instructor permission

A chamber ensemble experience for brass performers.

MUSC 121 Chamber Singers **0c-3l-0/1cr**

Prerequisite: Music major or instructor permission

Performs a broad spectrum from early Gregorian chant to contemporary rock cantatas.

MUSC 122 University Chorale **0c-3l-0/1cr**

Prerequisite: Music major or instructor permission

Studies and performs masterworks from the choral literature.

MUSC 123 Symphony Band **0c-3l-0/1cr**

Prerequisite: Music major or instructor permission

A large ensemble experience for woodwind, brass, and percussion performers.

MUSC 124 Concert Band **0c-3l-0/1cr**

A large ensemble experience for woodwind, brass, and percussion performers.

MUSC 125 Marching Band **0c-6l-0/1cr**

MUSC 126 Music Theater **0c-6l-0/1cr**

Prerequisite: Music major or instructor permission

The study and performance of a wide variety of musical theater venues from opera to Broadway.

MUSC 127 Percussion Ensemble	0c-4I-0/1cr	composer study and style profiles. Possible topics include Sacred Vocal Music, English Renaissance and Baroque Vocal Music, Vocal Music of Franz Schubert, Vocal Music of the American 20th Century, Vocal Music for the High School Students, etc. This is a repeatable course that meets the Music Department's ensemble requirements.
Prerequisite: Music major or instructor permission The student performs pieces ranging from traditional to contemporary, novelty to transcriptions, and marimba ensembles to world music.		
MUSC 128 Opera/Musical in Production Ensemble	0c-3I-0/1cr	MUSC 139 Piano Ensemble 1c-1I-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 course work in the areas of musical training and performance experience for the singer-actor and the pit orchestra musician. Course work 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 that meets Music Department ensemble requirements.		Prerequisites: Music major, instructor permission The study and performance of repertoire for piano in ensemble with other pianists, vocalists, and instrumentalists. Special considerations for accompanying and collaborating in chamber music are discussed and practiced.
MUSC 129 University Symphony Orchestra	0c-5I-0/1cr	MUSC 140 Popular Music Ensemble 0c-3I-1cr
Prerequisite: Music major or instructor permission Provides experience performing standard orchestral repertoire as well as new and unusual works for orchestra.		Prerequisite: MUSC 114 and/or instructor permission by audition on voice or an instrument or by presenting evidence of electronic music creation Laboratory for performance and creative expression in any popular music style, past, present, or future. Instruction in small groups selected by instructor and students including pre-existing bands, as well as group instruction and critiques. Areas of focus include creativity within popular music styles, group rehearsal dynamics and techniques, and preparing for live performances. May be repeated for credit.
MUSC 130 String Ensemble	0c-2I-0/1cr	MUSC 151 Class Voice I 1c-1I-1cr
Prerequisite: Music major or instructor permission Provides string players an experience with music from Baroque works of Vivaldi, Handel, and Bach to the new and experimental.		Prerequisite: Music major or instructor permission 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 131 University Wind Ensemble	0c-3I-0/1cr	MUSC 152 Class Voice II 1c-1I-1cr
Prerequisite: Music major or instructor permission A large ensemble experience for woodwind, brass, and percussion performers.		A continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.
MUSC 132 Men's or Women's Chorus	var-0-1cr	MUSC 153 Class Piano I 1c-1I-1cr
A choral ensemble experience for men's and women's voices respectively.		Prerequisite: Music major or instructor permission For music 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 133 Woodwind Ensemble	0c-2I-0/1cr	MUSC 154 Class Piano II 1c-1I-1cr
Prerequisite: Music major or instructor permission A chamber ensemble experience for woodwind performers.		A continuation of Class Piano I; for music majors.
MUSC 134 University Chorus	0c-3I-0/1cr	MUSC 155 Class Strings I 1c-1I-1cr
A large, mixed chorus that performs major works each semester.		Prerequisite: Music major or instructor permission 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 135 Jazz Ensemble	0c-3I-0/1cr	MUSC 157 Class Percussion I 1c-1I-1cr
Prerequisite: Music major or instructor permission The study and performance of all styles of jazz, including swing, Latin, rock fusion, and other contemporary idioms.		Prerequisite: Music major or instructor permission 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 136 Advanced Jazz Ensemble	0c-3I-0/1cr	MUSC 159 Class Brass I 1c-1I-1cr
Prerequisite: Music major or instructor permission The student performs a mixture of jazz styles from Latin to swing, ballads to fusion.		Prerequisite: Music major or instructor permission 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 137 Piano Accompanying	0c-1I-0/1cr	MUSC 161 Class Woodwinds I 1c-1I-1cr
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.		Prerequisite: Music major or instructor permission 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 138 Vocal Repertoire Ensemble	0c-2I-0/1cr	
Prerequisites: Music major with a successful audition and instructor permission Explores the performance practices of various styles and genres of classical vocal music, augmenting course work in the areas of applied voice training and performance experience for vocal musicians in a master class format. Features a different vocal style/genre/theme each semester. Course work for the ensemble consists of performance and coaching of assigned music concentrating on historically informed performance practice, as well as		

MUSC 180 Technology for General Musicianship 2c-11-2cr

Prerequisite: Music major enrolled in BA or BFA 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 18th and 19th 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 18th and 19th 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 219 Music Education Practicum Ensemble var-0-1cr

Prerequisite: At least one of the following must be completed before enrollment: MUSC 151, 155, 157, 159, or 161, or instructor permission

An opportunity for preservice music teachers or other interested persons to continue to gain experience in a music ensemble setting either in the role of performer or conductor. For music majors or approved non-majors, this is an opportunity for students to gain additional experience as a performer in a low-stress environment. For music education majors who have reached Step 1, this course offers the opportunity for students to gain hands-on experience as an ensemble conductor. Both performers and conductors gain an awareness of age-appropriate student music literature used in public school music programs.

MUSC 240 Technology in the Music Classroom 2c-11-2cr

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 311 Fundamentals of Conducting 3c-0l-2cr

Prerequisite: Music 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-11-2cr

Prerequisite: Admission to Step 1 of the 3-Step Process

Familiarizes students with contemporary music education methods for the elementary general music classroom. Includes teaching and learning strategies 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-11-2cr

Prerequisite: Admission to Step 1 of the 3-Step Process

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-11-1cr

Prerequisite: Admission to Step 1 of the 3-Step Process

Corequisite: EDUC 242

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-11-2cr

Prerequisites: MUSC 212, admission to Step 1 of the 3-Step Process

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 that influence music teaching at this level.

MUSC 351 Italian Diction and Literature 1c-11-1cr

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 17th and 18th centuries.

MUSC 353 French Diction and Literature 1c-11-1cr

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-11-1cr

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-01-0/1cr

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-01-2cr

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.

MUSC 405 Piano Pedagogy 3c-01-3cr

Prerequisites: Junior standing in piano and a piano major or minor
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.

MUSC 406 Vocal Pedagogy 3c-01-3cr

Prerequisite: APMU 255 or instructor permission
Introduces vocal anatomy, the acoustics of singing, and various methods of vocal instruction. Applies pedagogical principles through mock teaching and teaching observation, and students keep a teaching journal.

MUSC 408 Marching Band Techniques 2c-01-2cr

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.

MUSC 415 Counterpoint I 3c-01-3cr

Prerequisite: 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 cantus firmus, as well as original compositions in the style of Bach. In addition to close study of Bach's *Two-Part Inventions* and of the fugues from the *Well-Tempered Clavier*, students hear and discuss their exercises and compositions in class so that they may learn from one another.

MUSC 417 Orchestration 3c-01-3cr

Prerequisite: MUSC 216
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.

MUSC 418 Form and Analysis I 3c-01-3cr

Prerequisite: MUSC 216
Thoroughly explores the various forms of Western music through in-depth analyses of representative examples by master composers from Baroque through 20th century. Many genres are introduced, with a special emphasis on string quartet literature.

MUSC 420 Professional Practices 2c-01-2cr

Prerequisite: Junior standing
An overview of skills needed to be a successful, versatile, and employable musician in the 21st century, includes curriculum vitae preparation, self-promotion and marketing, finding and creating opportunities, communication skills, grant-writing and resource acquisition, and developing a

professional network. Primarily for music majors and taught in a seminar format with guest lectures.

MUSC 475 Music Lab var-0cr

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.

MUSC 481 Special Topics 3c-01-3cr

Prerequisite: 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.

MUSC 482 Independent Study var-1-6cr

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost
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.

MUSC 493 Internship in Music var-1-6cr

For music majors who wish to receive practical experience working with people in music or in areas related to music.

**NMDT: Nuclear Medicine Technology
Department of Nursing and Allied Health Professions
College of Health and Human Services**

NMDT 427 Nuclear Scintigraphy 3c-01-3cr

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.

NMDT 428 Radiation Physics 3c-01-3cr

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.

NMDT 429 Nuclear Medicine Instrumentation 2c-11-3cr

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.

NMDT 430 Radiation Biology and Radiation Protection 2c-01-2cr

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.

NMDT 431 In Vivo/In Vitro Nonimaging 1c-01-1cr

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.

NMDT 432 Radiopharmaceuticals 3c-01-3cr

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.

NMDT 433 Introduction to Tomographic Imaging 1c-01-1cr

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.

NMDT 434 Clinical Nuclear Medicine **0c-401-16cr**

Prerequisites: Completion of 77cr at IUP and Phase I at NMI
Student completes 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.

NMTT: Nanomanufacturing Technology
Department of Physics
College of Natural Sciences and Mathematics

NMTT 311 Materials, Safety, and Equipment Overview for Nanofabrication **3c-21-3cr**

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-21-3cr**

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-21-3cr**

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 Penn State Nanofabrication Facility cleanrooms.

NMTT 314 Lithography and Patterning Techniques **3c-21-3cr**

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-21-3cr**

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-21-3cr**

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-01-1cr**

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 102 Disaster Preparedness and Related Health Issues **3c-01-3cr**

Learn to prepare against common types of terroristic threats, technical hazards, and natural disasters. Focuses on developing and maintaining emergency plans before, during, and after a disaster. Addresses health issues and preparation of families and communities for disasters.

NURS 143 Healthy People—Promoting Wellness **3c-01-3cr**

An introduction to the pathway of health and wellness through contributions to one’s environment and community. The interconnectedness of self, others, nature, and society on one’s health and wellness is emphasized. Students are guided through decision-making processes regarding life choices to maximize personal well-being. A personal wellness plan that incorporates aspects of physical and social health is developed using the Healthy People framework. Completion of NURS 143 fulfills the Liberal Studies Dimensions of Wellness requirement. Other 143 courses will also fulfill this requirement, and any of these courses may be substituted for each other and may be used interchangeably for D/F repeats but may not be counted for duplicate credit.

NURS 202 Foundations of Child Health **3c-01-3cr**

Focuses on conditions that affect the health of children. 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 Fundamentals I Clinical **0c-31-1cr**

Prerequisites: Nursing majors only, BIOL 150 grade of “C” or better; CHEM 101, 102; sophomore standing; or permission
Corequisite: NURS 212 or permission
Presents concepts and basic nursing skills fundamental to the safe practice of professional nursing. A foundation for students to build their professional knowledge base as well as develop interpersonal and psychomotor skills in a variety of settings with a focus on patient-centered care for adults and older adults.

NURS 212 Fundamentals I Theory **3c-01-3cr**

Prerequisites: Nursing majors only, BIOL 150 grade of “C” or better; CHEM 101, 102; sophomore standing; or permission
Corequisite: NURS 211 or permission
An introduction to the nursing discipline, nursing process, professional standards, and values that are foundational to practice. An overview of the various levels of health care services and the professional nursing role. Concepts for effective nurse-client relationships are examined including therapeutic communication, evidence-based nursing interventions, quality patient-centered care, and safe nursing practice.

NURS 213 Fundamentals II Clinical **0c-31-1cr**

Prerequisites: NURS 211, 212 with grades of “C” or better
Prerequisite or Corequisite: BIOL 240
Corequisites: NURS 214, 236; or permission
Builds on the Fundamentals I Clinical course. Opportunities for students to continue to develop professional knowledge and skills with diverse individuals and families in a variety of settings with a focus on adults and older adults. Emphasizes developing the ability to perform comprehensive health assessments, use therapeutic communication, and provide basic nursing skills while promoting safe and quality health care.

NURS 214 Health Assessment **3c-01-3cr**

Prerequisites: NURS 211, 212 with grades of “C” or better
Prerequisite or Corequisite: BIOL 240 with a grade of “C” or better
Corequisites: NURS 213, 236; or permission
An introduction to basic health assessment for the purpose of determining a client’s health status. Students learn to conduct a comprehensive health history and physical assessment on adults and older adults. Incorporates concepts of human anatomy and physiology in the assessment of clients. Identifies appropriate nursing interventions to promote health.

- NURS 236 Fundamentals II Theory** **3c-01-3cr**
Prerequisites: NURS 211, 212 with grades of “C” or better
Prerequisite or Corequisite: BIOL 240 with a grade of “C” or better
Corequisites: NURS 213, 214; or permission
 An introduction to fundamental nursing concepts that apply to the practice of professional nursing. Topics include elements of holistic care, promotion of psychosocial and physiologic health, and introduction to medication administration in nursing practice. Provides physiological rationale for nursing interventions with a focus on knowledge and skills to ensure safe delivery of nursing care.
- NURS 306 Problem Solving in Nursing** **3c-01-3cr**
 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 311 Introduction to Nursing Informatics** **2c-01-2cr**
Prerequisites: NURS 211, 212, 213, 214, 236
 An introduction to basic nursing informatics for the purpose of role development of the emerging contemporary nurse. Incorporates concepts of metastructures and tools used in the workflow process. Examines legislative, cultural, and safety aspects. Discusses current and future applications emerging from the science of informatics.
- NURS 312 Professional Nursing** **2c-01-2cr**
Prerequisite: ENGL 202
Corequisites: NURS 330 and 331; or 332 and 333; or 336 and 337
 Examines values, cultural issues, code of ethics, global and national health care policy, regulatory environments, professional standards and legal frameworks that impact health care decisions, determine professional conduct, and guide interactions with clients, families, and health care team members. Utilizes ethical decision-making frameworks to guide professional nursing practice. Focuses on developing the necessary skills to engage in scholarly writings and presentation.
- NURS 314 Health Policy and Law** **3c-01-3cr**
 Focuses on understanding the evolution of healthcare policy, health law, and federal and state regulation of healthcare financing programs. Introduces healthcare policy making; critical health policy issues; legislative, regulatory, and legal challenges; and legislative and political processes that impact the healthcare delivery system in the United States. (Cross-listed as ELR 314.)
- NURS 316 Evidence-Based Practice in Nursing** **3c-01-3cr**
Prerequisites: ENGL 202, MATH 217
Corequisites: NURS 330 and 331; or 332 and 333; or 336 and 337
 Focuses on understanding and critiquing nursing research. Emphasizes understanding the research process and utilization of current evidence in nursing practice. Focuses on developing the necessary skills to engage in scholarly writing and presentation.
- NURS 330 Care of the Child and Family** **2c-01-2cr**
Prerequisites: FDNT 212, PSYC 310, grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 331, 312 or 316; or permission
 Focuses on knowledge essential to providing nursing care to the child and family. Emphasizes prevention, recognition, implementation of the nursing process, and appropriate interventions for safe care of the child. Applies evidence-based practice for the care of children and families.
- NURS 331 Care of the Child and Family Clinical** **0c-6l-2cr**
Prerequisites: FDNT 212, PSYC 310, grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 330, 312 or 316; or permission
 Opportunities to apply the nursing process with children and their families in a variety of settings and demonstrate nursing professionalism in their interactions with individuals, families, and community. Increases students’ ability to perform comprehensive health assessments and collaborate with members of the health care team to identify problems, plan, intervene, and evaluate care for children and families. Emphasizes safe, comprehensive, evidence-based nursing care, and professional standards of practice.
- NURS 332 Maternal-Neonatal Health** **2c-01-2cr**
Prerequisites: FDNT 212, PSYC 310; grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 333, 312 or 316; or permission
 Focuses on knowledge essential to providing nursing care for pregnant women, neonates, and postpartum patients within a family context. Emphasizes implementation of the nursing process and appropriate interventions for safe care. Applies evidence-based practice for the care of pregnant women, neonates, and postpartum patients.
- NURS 333 Maternal-Neonatal Clinical** **0c-6l-2cr**
Prerequisites: FDNT 212, PSYC 310; grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 332, 312 or 316; or permission
 Opportunities to apply the nursing process with pregnant women, neonates, postpartum patients, and their families in a variety of settings and demonstrate nursing professionalism in their interactions with individuals, families, and community. Increases students’ ability to perform comprehensive health assessments and collaborate with members of the health care team to identify problems, plan, intervene, and evaluate care for pregnant women, neonates, postpartum patients, and their families. Emphasizes safe, patient-centered comprehensive, evidence-based nursing care, and professional standards of practice.
- NURS 334 Transitions in Professional Nursing** **3c-01-3cr**
Prerequisites or Corequisites: ENGL 202, licensed practical 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.
- NURS 336 Adult Health I** **4c-01-4cr**
Prerequisites: FDNT 212, PSYC 310; grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 337, 312 or 316; or permission
 Introduces disease processes and prevention, collaborative care, and implementation of the nursing process for adults and older adults. Enhances student knowledge regarding assessing human response to changing health and applying the appropriate nursing intervention for safe, patient-centered care. Applies evidence-based practice for the care of adults and older adults.
- NURS 337 Adult Health I Clinical** **0c-15l-5cr**
Prerequisites: FDNT 212, PSYC 310; grades of “C” or better in BIOL 240, 241, NURS 213, 214, 236; or permission
Corequisites: NURS 336, 312 or 316; or permission
 Opportunities to apply the nursing process to adults and older adults in a variety of settings and demonstrate nursing professionalism in their interactions with individuals, families, and community. Increases students’ ability to perform comprehensive health assessments and collaborate with members of the health care team to identify problems, plan, intervene, and evaluate care for adults and older adults. Emphasizes safe, patient-centered comprehensive, evidence-based nursing care, and professional standards of practice.
- NURS 410 Health Promotion and Social Issues** **3c-01-3cr**
Prerequisites: ANTH 211, PHIL 122, SOC 151
 An introduction to current social issues, models, and evidence-based research in health promotion, disease prevention, and population health relevant to individuals and communities. Explores individual and population health promotion assessment, health behavior interventions, and disease prevention in diverse populations to improve patient and population health outcomes. Develops and implements an intervention and prevention plan which addresses individual and population health problems. Critiques research and evidence-based practice relevant to population health.
- NURS 412 Nursing Management** **2c-01-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 330, 331, 332, 333, 336, 337; or permission
Corequisites: NURS 436, 437, 440
 Emphasizes leadership, communication and relationship building, knowledge of the health care environment, and resource management. Discusses

leadership/management skills and processes. Examines the role of designer/manager/coordinator of care in professional nursing in depth.

NURS 414 Health Policy and Patient Advocacy **3c-0l-3cr**
Prerequisite: Junior standing

Focuses on the legislative, regulatory, political, and advocacy issues including safeguarding autonomy, and promoting the social justice process that impacts the healthcare delivery services in the US. Examines the impact of policy and politics on healthcare, social equity, accessibility, cost, and affordability. Examines their role in health policy development at the federal, state, and local level. Analyzes selected policies for their effect on social issues, healthcare finance and delivery. Explores the influence of global health.

NURS 431 Public/Community Nursing Clinical **0c-6l-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 331, 333, 336, 337; or permission
Prerequisites or Corequisites: NURS 330, 332
Corequisite: NURS 434

Opportunities for clinical practice as a provider of public/community health nursing care for the individual, family, population, and global community and to function as a member of the interprofessional team when working among diverse and/or vulnerable populations. Emphasis is placed on leadership, management, and providing safe, comprehensive, evidence-based nursing care. The effect of health policy on client care is an integral part of the course.

NURS 432 Psychiatric/Mental Health **2c-0l-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 331, 333, 336, 337; or permission
Prerequisites or Corequisites: NURS 330, 332
Corequisite: NURS 433

Focuses on the principles, concepts, and best practices that guide nursing practice in a variety of psychiatric/mental health settings. Addresses the role of the nurse in primary, secondary, and tertiary prevention/intervention as it relates to individuals, families, and aggregates with mental health and psychiatric conditions.

NURS 433 Psychiatric/Mental Health Clinical **0c-6l-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 331, 333, 336, 337; or permission
Prerequisites or Corequisites: NURS 330, 332
Corequisite: NURS 432

Focuses on opportunities to provide mental health promotion, risk reduction, and disease prevention in a variety of settings and diverse populations. Increases students’ ability to perform as a member of inter-professional teams in acute and community-based psychiatric care facilities and to identify personal beliefs and how they impact the therapeutic relationship. Students assimilate evidence-based practice through critical reasoning to apply nursing strategies to assist individuals, families, and groups.

NURS 434 Public/Community Nursing **2c-0l-2cr**
Prerequisite: NURS 312, 316; grades of “C” or better in NURS 331, 333, 336, 337; or permission
Prerequisites or Corequisites: NURS 330, 332
Corequisite: NURS 431

Focuses on public/community health nursing care for the individual, family, population, and global community. Examines the influences of the health care delivery systems and theoretical frameworks applicable to public/community health. Considers the impact of technology, environment, society, and current issues in public/community health nursing.

NURS 436 Adult Health II **4c-0l-4cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 330, 331, 332, 333, 336, 337; or permission
Corequisites: NURS 412, 437, 440; or permission

Focuses on the adult and older adult, family, and community with critical and/or complex health problems and with a patient-centered approach to nursing care. Emphasizes the relationships among clinical manifestations of disease states, treatment, cultural influences, and associated nursing responsibilities. Focuses on utilizing students’ knowledge base of diagnos-

tics, pharmacology, interventions, and rehabilitation needs through critical reasoning to plan the care of patients with critical and/or complex health problems. Emphasizes the incorporation of evidence-based practice interventions into nursing practice.

NURS 437 Adult Health II Clinical **0c-6l-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 330, 331, 332, 333, 336, 337; or permission
Corequisites: NURS 412, 436, 440; or permission

Opportunities for clinical practice as a provider of care for critical and/or complex, acutely ill clients in a variety of settings. Places emphasis on leadership, management, and providing safe, comprehensive, evidence-based nursing care. Utilizes patient care technologies, information systems, and communication devices that support safe, patient-centered nursing care.

NURS 440 Nursing Management Clinical **0c-6l-2cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 330, 331, 332, 333, 336, 337; or permission
Corequisites: NURS 412, 436, 437; or permission

An opportunity for students to incorporate delegation and prioritization skills when caring for multiple patients in an adult health acute care setting. Emphasizes leadership skills and management principles to ensure delivery of high-quality, evidence-based, cost-effective care.

NURS 450 A Cognitive Approach to Clinical Problem Solving **3c-0l-3cr**
Prerequisites: NURS 312, 316; grades of “C” or better in NURS 330, 331, 332, 333, 336, 337; or permission
Corequisite: NURS 431 or 433 or 440 or 437; or permission

Focuses on advanced clinical problem-solving and decision-making skills needed by professional nurses. Factors that influence clinical problem solving are examined to facilitate higher-level thinking in simulated clinical situations.

NURS 455 Health Care Informatics **3c-0l-3cr**
Focuses on aspects of acquiring, storing, retrieving, and effectively utilizing health information to support decision making, knowledge, and outcomes. Combines concepts, theory, and practice from the cognitive, computer, and information sciences.

NURS 482 Independent Study **var-1-3cr**
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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 that extends and complements course work 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 100 Introduction to Philosophy **3c-0l-3cr**
Acquaints the beginning student with philosophical problems and methods. Possible topics include the existence of God, human freedom, the scope and limits of human knowledge, the nature of mind, the nature of morality, and the relationship between the individual and the state.

PHIL 101 Critical Thinking **3c-0l-3cr**
An introduction to basic principles of informal logic and critical thinking. An emphasis is on different kinds of arguments, methods of argument evaluation, and the analysis of arguments as they arise in various contexts, such as political debate, advertising, science, law, and ethics.

- PHIL 122 Contemporary Moral Issues** **3c-01-3cr**
Examines attempts to answer foundational questions of ethics, including the following: Why should we be moral? What do morally correct actions have in common? Are there objective moral standards, or are moral codes relative to individual societies? Does morality require religion? Diverse moral theories are applied to contemporary debates and controversies, such as environmental ethics, abortion, capital punishment, affirmative action, and animal rights. Readings will draw on historical and contemporary figures.
- PHIL 130 Introduction to Biomedical Ethics** **3c-01-3cr**
Introduces ethical issues in medicine and health care, such as patient autonomy and surrogate decision making; death, dying, and end of life care; reproductive ethics; justice and allocation of health care resources; global health, poverty, and development; public health ethics; and ethics of emerging medical technologies.
- PHIL 221 Symbolic Logic I** **3c-01-3cr**
Introduces students to the study of formal patterns of good reasoning. Topics include symbolizing English sentences in an artificial language, distinguishing between the semantics and syntax of that language, and learning to test for logical properties and relations using semantic methods (truth-tables, models) and syntactic methods (derivations). Students with an interest in computer science and mathematics will find the material of particular interest and use.
- PHIL 223 Philosophy of Art** **3c-01-3cr**
Introduces students to the philosophical investigation of art and aesthetics. Focuses on some of the major problems in the philosophy of art, for example, the definition of art, the nature of works of art, the nature of artistic creativity, the evaluation of works of art, the relationship between art and emotion, and the relationship between aesthetics and ethics.
- PHIL 232 Philosophies of Love** **3c-01-3cr**
Examines the philosophical foundations of contemporary 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 (Titled *Philosophical Perspectives on Love, Marriage, and Divorce* before 2014-15.)
- PHIL 240 Philosophy and the Good Life** **3c-01-3cr**
Examines philosophical attempts to say what it means to live a good life. Is living a good life simply about maximizing the pleasure one experiences? Does a good life require religious faith? Is being virtuous essential to living a good life? Historical thinkers considered may include Plato, Aristotle, Confucius, Laozi, Augustine, Aquinas, Rousseau, Nietzsche, and Russell. Contemporary philosophical work on happiness informed by empirical research may also be considered.
- PHIL 270 Ethics and the Environment** **3c-01-3cr**
Applies ethical theory to environmental issues, including resource depletion, animal rights, biotic endangerment, environmental degradation, climate change, and environmental justice. Considers arguments by which human-caused environmental destruction is intrinsically wrong, wrong independently of human interests and purposes, and arguments for environmental policies by which the following are granted rights, interests, or inherent value: non-human animals, all living things, all natural things, biotic communities, and ecosystems. Also considers arguments that environmental policies cannot be applied globally without injustice to humans, including poor and indigenous peoples.
- 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 320 Ethical Theory** **3c-01-3cr**
Examines historical and contemporary work on fundamental issues in ethical theory, with an emphasis on the three major approaches in normative ethics: consequentialism, deontology, and virtue ethics. Also explores select topics in contemporary metaethics, such as the meaning of moral discourse, the possibility of moral knowledge, and the nature of reasons and moral motivation.
- PHIL 323 Political Philosophy** **3c-01-3cr**
Through an examination of Ancient, Modern, and contemporary political thought, introduces the key issues of political philosophy: the justification of government authority, the role of the government in the just distribution of wealth in society, the nature of equality, the nature and importance of individual liberty and rights, the connections between race, gender, and political power, and the question of the universal applicability of concepts fundamental to European and American political philosophy in light of increasing globalization.
- PHIL 324 Ancient Greek 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. (Titled *Ancient Philosophy* before 2014-15.)
- PHIL 325 Early Modern European Philosophy** **3c-01-3cr**
A study of exemplary philosophical texts from the late 16th through the late 18th 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. (Titled *Modern Philosophy* before 2014-15.)
- PHIL 326 Existentialism** **3c-01-3cr**
Examines existentialism as a philosophical movement, one that rejects both traditional religious and overly reductive, scientific conceptions of human existence. As an alternative, existentialist philosophers share the project of trying to articulate a conception of an authentic, meaningful life outside of the parameters of these approaches. Readings are drawn from major thinkers in this movement, including Søren Kierkegaard, Friedrich Nietzsche, Martin Heidegger, Jean-Paul Sartre, Simone de Beauvoir, and Albert Camus. (Titled *Phenomenology and Existentialism* before 2014-15.)
- PHIL 330 Philosophy of Science** **3c-01-3cr**
Philosophical investigation into the character of empirical scientific thought and practices: measures of confirmation; empirical success; theory ladenness of observation; scientific rationality and the aims of science; the inference from empirical success to truth; the logic of explanation; the character of natural laws; levels of theorizing and intertheoretic reduction; the ideal of objectivity and the place of extra-scientific values in theory appraisal. No special background required.
- PHIL 350 The Human Experience of Time** **3c-01-3cr**
Examines philosophical questions about the nature and experience of time. Explores how philosophical views about time are informed by work in different fields, such as anthropology, religious studies, and physics. Questions include whether time is real or an illusion, whether it flows, whether the past, present, and future are equally real, whether time travel is possible, how different cultures think about time and what light that sheds on its true nature. Readings drawn from a wide range of historical and contemporary sources.
- PHIL 360 Philosophy of Mind** **3c-01-3cr**
Prerequisite: Philosophy 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 390 Philosophy of Human Nature** **3c-01-3cr**
Examines philosophical theories of human nature, including how traditional philosophical debates about the mind, morality, persons, and freedom are informed by recent empirical work in the cognitive sciences. Topics covered may include philosophical and scientific debates about the innate content

and structure of the human mind, moral judgment, the possibility of free will, the extent to which human beings are rational, and the nature of the self and self-knowledge. Connections between conceptions of human nature and political philosophy, as well as bioethical issues concerning enhancement and transhumanism, may also be discussed.

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 nonsensory 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 central issues in the philosophy of law, including law and morality, the interpretation of law, and philosophical and legal issues concerning punishment, justice, rights, and liberty. Combines philosophical theory with consideration of selected court cases to develop an 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 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 483 Honors Thesis **var-1-6cr**

Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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.

PHIL 493 Internship in Philosophy **var-3-6cr**

Prerequisites: Permission of the department, junior or senior philosophy 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 course work 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 non-laboratory 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. A non-laboratory course for Liberal Studies requirements.

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 121 Physics I Lab **0c-3l-1cr**

Prerequisite or 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**

Prerequisite or 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 PHYS 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 calculus-based course in general college physics utilizing the techniques in problem solving learned in PHYS 131 applied to more advanced topics; topics covered are: electric fields, magnetic fields, Coulomb's Law, Gauss' Law, Ampere's Law, circuits, geometric optics, and physical optics.

PHYS 141 Physics I-C Lab **0c-3l-1cr**

Prerequisite or 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**

Prerequisite or Corequisite: PHYS 132 at least concurrently
Physics laboratory at same level as Physics II; exercises in optics, mechanics, wave motion, and sound.

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 are introduced.

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 260 Introduction to Nanoscience and Technology	3c-01-3cr	
Prerequisite: PHYS 112 or 132		
An introduction to the theoretical and experimental concepts of the emerging field of nanotechnology. Prepares students from a wide range of disciplines for careers or higher studies in areas involving nanotechnology. Inherently interdisciplinary in nature, bridges across physics, chemistry, biology, and computer science. Covers the emerging role of nanostructure materials for current and future applications in the fields of electronics, energy, textiles, and medicine.		
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 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-6l-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 355 Computer Interfacing	2c-2l-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 401 Theoretical Physics	3c-01-3cr	
Prerequisites: PHYS 131, 132; MATH 125, 126		
Prerequisite or Corequisite: MATH 341 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 441 Classical Mechanics	3c-01-3cr	
Prerequisites: PHYS 131, 132; MATH 125, 126		
Corequisite: MATH 341 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 and 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, MATH 341		
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.		
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 482 Independent Study in Physics	var-1-6cr	
Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost		
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 Department faculty member but does not necessarily involve regular lecture or laboratory hours.		
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 Power and Democracy in America	3c-01-3cr	
Investigates the way American government works (and why sometimes it doesn't). Examines who gets what, why, and how in America and who pays for it, with an emphasis on understanding the origin, structure, and functions of US government. Looks beyond the divisions between "liberals" and "conservatives" to understand and evaluate contemporary political events and practices. Founding principles and their modern application are a core focus. (Titled American Politics before 2014-15.)		
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	
Examines 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 260 Contemporary Political Ideas	3c-01-3cr	
A survey of political ideas influential in contemporary politics, knowledge of which is essential for various analyses in political science. Ideas discussed include conservatism, "liberalism" or social democracy, socialism, anarchism, fascism, political Islam, and feminist and environmentalist thought.		
PLSC 280 Comparative Government I: Western Political Systems	3c-01-3cr	
Analyzes Western political systems with emphasis on major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.		

PLSC 281 Special Topics	var-1-3cr	PLSC 351 Legislative Process	3c-01-3cr
Prerequisite: As appropriate to course content		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.	
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 354 Metropolitan Problems	3c-01-3cr
PLSC 282 International Relations	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.	
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.		PLSC 355 Intergovernmental Relations	3c-01-3cr
PLSC 283 American Foreign Policy	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.	
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.		PLSC 358 Judicial Process	3c-01-3cr
PLSC 285 Comparative Government II: Non-Western Political Systems	3c-01-3cr	Prerequisite: PLSC 111	
Analyzes major non-Western political systems with emphasis on authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.		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 300 Research Methods in Political Science	3c-01-3cr	PLSC 359 Constitutional Law and Civil Liberties	3c-01-3cr
Prerequisite: PLSC 101 or 111		Prerequisite: PLSC 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 political science majors and minors are strongly urged to enroll.		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 339 Jihad and the Origins of Islamist Movements in the Middle East	3c-01-3cr	PLSC 360 Classical Political Thought	3c-01-3cr
Prerequisites: Sophomore standing, 3cr of college history		Restriction: Not for credit after PHIL 323	
Discusses the concept of “jihad” in Islamic history: its origins, development, and historical deployment by groups within the Muslim community. Analyzes the history and origins of groups such as al-Qaeda, the Taliban, and ISIS and considers whether these groups are “medieval” or actually modern products of globalization. (Also offered as HIST 339; may not be taken for duplicate credit.)		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 344 Terrorism	3c-01-3cr	PLSC 361 Modern Political Thought	3c-01-3cr
Prerequisite: PLSC 101 or 111 or CRIM 101 or 102 or instructor permission		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.	
An in-depth study of the legal and international issues that the United States faces in response to combating international terrorism. The emphasis is placed on identifying causes of terrorism and the most plausible threats; terrorist networks, their commonalities and differences, and the difficulty in countering; and determining appropriate responses, to include political and legal implications, threat analysis, physical security, and target hardening. (Also offered as CRIM 344; may not be taken as duplicate credit.)		PLSC 362 American Political Thought	3c-01-3cr
PLSC 348 Top Secret America: The Rise and Reach of the National Security State	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.	
Focuses on the historical development of the concept of national security in the US and on the intersection of national and broader international security concerns in the Cold War context. Identifies, for the Cold War era and beyond, diplomatic, military, and intelligence capabilities of governments and explores how individuals and groups conceptualized themselves, and their security. Explores one powerful motivator: fear and how it translated into political actions and citizen involvement in Cold War concepts. HIST 348 and PLSC 348 may be substituted interchangeably for D/F repeats, but may not be used for duplicate credit.		PLSC 370 The Practice of Public Administration	3c-01-3cr
PLSC 350 The Presidency	3c-01-3cr	Examines the environment and structure of public sector organizations; organizational theory and organizational culture; intergovernmental and intra-organizational relations; leadership and ethics; the planning, management, and evaluation of programs and services; the administration of human resources; budgeting and finance; and management information. Emphasizes the integration of theory and practice through case studies and projects.	
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 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 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 (currently inactive); PLSC 384 Middle East (currently inactive); PLSC 385 Central and Eastern Europe (currently inactive); PLSC 387 Latin America (currently inactive)	

PLSC 388 Dimensions of National Security **3c-01-3cr**

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 International Development Strategies **3c-01-3cr**

Suggested Prerequisites: PLSC 280 and/or 285

Political characteristics of emerging nations; impact of economic and social change on political structure; evolving patterns of political development; and techniques of nation building.

PLSC 404 Women and Politics **3c-01-3cr**

Focuses on the role of women in political life and policies that especially affect women in both developing and developed countries.

PLSC 405 Sexuality and Law **3c-01-3cr**

Critically examines the role of law in regulating sexuality in the United States. Analyzes legal and constitutional questions regarding sex, sexual orientation, and identity. Using statutory law and written judicial opinions, the course explores the evolution of legal approaches to issues including regulation of married and non-married sexual activity, same-sex marriage and sexual orientation, and First Amendment protections of LGBT rights. Emphasizes the role of the Supreme Court's interpretation of the Constitution, especially of due process and equal protection.

PLSC 422 International Law and Organizations **3c-01-3cr**

A survey of the main concepts and history of international law and an analysis of the major international organizations such as the United Nations, European Union, and Organization of American States. Knowledge of how such organizations operate is essential to understand international relations.

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 on which to base sound decisions. The process involves 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 US 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 Office of the Provost

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 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 indepen-

dence, 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 482 Independent Study **var-1-3cr**

Prerequisite: Prior approval through advisor, faculty member, program coordinator, dean, and Office of the Provost

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 **var-3-12cr**

Offers practical experience in a field in which 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, psychology 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 through death, particularly as they relate to psychological development of the individual. May receive credit toward the psychology 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 on optimum development of individual. May receive credit toward the psychology 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 313 Non-normative Development in Adulthood (CAAST) **3c-01-3cr**

Prerequisite: PSYC 101

A survey of non-normative transitions for younger, middle-aged, and older adults. Emphasis on how various losses, neurocognitive disorders, abuse, and neglect affect adult development. A component of the interdisciplinary Child and Adult Advocacy Studies (CAAST) minor and certificate programs. May not get credit for both PSYC 312 and 313.

PSYC 314 Child and Adolescent Psychopathology (CAAST)	3c-01-3cr	PSYC 341 Conditioning and Learning	3c-21-4cr
Prerequisite: PSYC 101		Prerequisites: PSYC 101, 290	
An in-depth examination of theories and research related to risk factors and protective factors in the development of children and adolescents. Highlights how physical, cognitive, and social development can be impacted by violence. A component of the interdisciplinary Child and Adult Advocacy Studies (CAAST) minor and certificate programs. May not get credit for both PSYC 311 and 314.		An examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.	
PSYC 315 Experimental Development Psychology	3c-21-4cr	PSYC 342 Human Cognition: Memory and Thinking	3c-21-4cr
Prerequisite: PSYC 280 or 290		Prerequisites: PSYC 101, 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. May receive credit toward the psychology major or minor for only one of PSYC 310, 311, or 315.		A study of methods and findings in areas of human memory and human information processing. May not receive credit toward the psychology major or minor for both PSYC 342 and 345.	
PSYC 320 Personality	3c-01-3cr	PSYC 345 Introduction to Human Cognition	3c-01-3cr
Prerequisite: PSYC 101		Prerequisite: PSYC 101	
Provides comparative analysis of major representative traditional and contemporary theories of personality.		An overview of cognitive psychology. The Information Processing Model is contrasted with its predecessor, Behaviorism, and its contemporary challenger, Connectionism. May not receive credit toward the psychology major or minor for both PSYC 342 and 345.	
PSYC 321 Abnormal Psychology	3c-01-3cr	PSYC 350 Physiological Psychology	3c-21-4cr
Prerequisite: PSYC 101		Prerequisites: PSYC 101, 290	
The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.		A study of the relationship between behavior and the anatomy and physiology of the nervous system. May not receive credit toward the psychology major or minor for both PSYC 350 and 356.	
PSYC 322 Violence Across the Life Span	3c-01-3cr	PSYC 356 Biopsychology	3c-01-3cr
Prerequisites: PSYC 101, department permission		Prerequisite: PSYC 101	
A multidisciplinary and contextual approach to understanding interpersonal violence across the lifespan. Emphasizes skill building in mandated reporting, forensic interviewing, documentation of violent incidents, working as a member of a multidisciplinary team, and being an advocate for violence prevention. May be taken for major or minor credit. Includes simulations of forensic interviews that take place outside of class time and that are required aspects. Simulation experiences provide practice carrying out a multidisciplinary approach to forensic investigations.		A study of the relationship between behavior and the anatomy and physiology of the nervous system. May not receive credit toward the psychology major or minor for both PSYC 350 and 356.	
PSYC 325 Psychological Testing and Measurement	3c-21-4cr	PSYC 359 Sensation and Perception	3c-21-4cr
Prerequisites: MATH 217, PSYC 101, sophomore standing		Prerequisite: PSYC 290	
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.		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 330 Social Psychology	3c-01-3cr	PSYC 360 Sensory Perception	3c-01-3cr
Prerequisite: PSYC 101		Prerequisite: PSYC 101	
The study of the effects of the social environment on human behavior. Topics include perception of persons, attitude formation and change, and small-group interaction.		Introduces the biological and psychological processes that determine our perceptions and their relationships to physical properties of the environment. May receive credit toward the psychology major or minor for only one of PSYC 360 or 359.	
PSYC 331 Environmental Psychology	3c-01-3cr	PSYC 371 Human Motivation	3c-01-3cr
Prerequisite: PSYC 101		Prerequisite: PSYC 101	
The study of the relationship between human behavior and its environmental context. Emphasizes the physical environment, both natural and built.		A systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.	
PSYC 332 Community Psychology and Prevention Science (CAAST)	3c-01-3cr	PSYC 372 Drugs and Behavior	3c-01-3cr
Prerequisite: PSYC 101 or instructor permission		Prerequisites: PSYC 101, junior standing or permission	
An introduction to the guiding principles of community psychology with an emphasis on prevention. Employs teamwork and service activities to apply students' new knowledge in addressing social and/or health issues impacting their communities. A component of the Child and Adult Advocacy Studies (CAAST) curriculum.		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 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 the one who is dying are discussed.	

PSYC 379 Psychology of Human Sexuality	3c-01-3cr	PSYC 482 Independent Study in Psychology	var-1-3cr
Prerequisite: PSYC 101		Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and the Office of the Provost	
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.		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 380 Gender and Violence	3c-01-3cr	PSYC 483 Honors Thesis	var-1-6cr
Prerequisite: PSYC 101		Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost	
A multidisciplinary approach to understanding interpersonal violence (across the life span) as impacted by gender. Analyzes interpersonal violence from a psychological, gendered, and social construction perspectives. Includes definitions and descriptions of forms of violence. Addresses the inter-connections and co-occurrence of violent incidents. Explores the relation of gender to the experience, reaction, and recovery from violence. An analysis of how gender roles contribute to interpersonal violence. Examines approaches to intervention and prevention of violence. Course is a component of the Child and Adult Advocacy Studies (CAAST) curriculum.		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 388 Forensic Psychology	3c-01-3cr	PSYC 493 Psychological Practicum	var-1-12cr
Prerequisite: PSYC 101		Prerequisites: PSYC 101, department permission	
An examination of current topics at the interface between psychology and the legal system.		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.	
PSYC 389 Psychology of Music	3c-01-3cr	PUBH: Public Health	
Prerequisite: PSYC 101		Colleges of Health and Human Services, Humanities and Social Sciences, and Natural Sciences and Mathematics	
An overview of theory and research on the psychological foundations of music, including music cognition, music perception, and the social psychology of music.		PUBH 122 Foundations of Public Health	3c-01-3cr
PSYC 390 Industrial-Organizational Psychology	3c-01-3cr	Prerequisite: BIOL 301; MATH 216 or 217; PUBH 122	
Prerequisites: MATH 214 or 217, PSYC 101		Defines public health and its origins and foundations as a field of inquiry. Explains the context of modern public health systems, major approaches to analyzing and understanding human health patterns, and the structure of public health systems in the United States.	
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.		PUBH 306 Research Design and Analysis in Public Health	3c-01-3cr
PSYC 410 Historical Trends in Psychology	3c-01-3cr	Prerequisites: BIOL 301; MATH 216 or 217; PUBH 122	
Prerequisites: PSYC 101, junior or senior standing or permission		Introduces methodological and ethical research principles in public health. Includes study designs, data collection, human subjects protection, quantitative and qualitative approaches, program evaluation, and community-based participatory research applications. Applies relevant case studies to emphasize research methods used, such as hypothesis generation and testing, study design, data collection and analysis, searching and critically evaluating research literature, identifying strengths and weaknesses of research studies, and drawing conclusions from research evidence.	
A comprehensive overview of historical antecedents of contemporary psychology with an emphasis on their implications for future developments in the field.		PUBH 493 Internship in Public Health	var-3-6cr
PSYC 411 Psychology of Women	3c-01-3cr	Prerequisites: PUBH 122, 306; BIOL 301; SOC 442; ECON 360; GEOG 316; NURS/ELR 314; NURS 410, 444; senior status	
Prerequisites: PSYC 101, junior or senior standing or instructor permission		A capstone opportunity for students to analyze and apply public health theories/models and research into their specific concentrations and experience the role of the public health professional. Consists of weekly one-hour seminar and weekly mentorship experience with public health professional 120-240 hours.	
A critical examination of the assumptions about women that 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.		QBUS: Quantitative/Business	
PSYC 450 Introduction to Clinical Psychology	3c-01-3cr	Department of Information Systems and Decision Sciences	
Prerequisites: PSYC 101, 320, 321, instructor permission		Eberly College of Business and Information Technology	
An overview of clinical psychology, with emphasis on clinician's use of methods of evaluation and on treatment and modification of behavior.		<i>Note:</i> 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.	
PSYC 480 Honors Seminar in Psychology	3c-01-3cr	QBUS 215 Business Statistics	3c-01-3cr
A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6cr.		Prerequisite: MATH 214	
PSYC 481 Special Topics in Psychology	var-1-3cr	Expands on 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.	
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.			

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 450 Data Science for Business 3c-01-3cr**Prerequisite:** QBUS 215

An introduction to the practice of data science with a broad set of data analytic skills based on building real analytic applications on a variety of real data, including big data, unstructured data, and textual data. Skills include accessing and transferring data, applying various analytical frameworks, applying methods from machine learning and data mining, conducting large-scale rigorous evaluations with business goals in mind, and visualizing data analytic results.

QBUS 482 Independent Study var-1-3cr**Prerequisite:** Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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 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 3c-01-3cr

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 3c-01-3cr

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

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 4c-01-4cr

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 6 months to 15 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 4c-01-4cr
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.

RGPL: Regional Planning
Department of Geography and Regional Planning
College of Humanities and Social Sciences

RGPL 103 Global Cities: Issues in Planning and Development 3c-01-3cr
An introduction to the developmental and regional planning issues facing contemporary Western and non-Western cities. A theoretical framework sets up detailed case studies of developmental issues that are 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 203 Planning History 3c-01-3cr
Examines the history of the planning profession and how the planner's role has evolved over time. Considers the historical context of planning solutions relative to contemporary urban problems by examining the planning tradition from its early antecedents through modern times. Particular attention is directed toward the genesis of planning in the United States during the mid-19th and early 20th centuries. Significant plans, people, projects, and movements in the history of planning are discussed in relation to the evolving traditions of the planning profession.

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 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
Presents automated methods for creating, maintaining, and analyzing spatial data. Includes (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 course from GEOG 341, 342, BIOL 103, 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 404 Transportation Planning 3c-01-3cr
Prerequisite: GEOG/RGPL 333 or RGPL 350, or one course from the economic geographer concentration
Introduces the major themes and methods of transportation planning, particularly in an urban context. It is project oriented and supported by readings from the scholarly literature covering themes such as modes of transit, land use implications, and commercial development. Reading assignments are organized topically and coordinated with two workbook projects that develop applied skills. Topics include theory, empirical description, and

methodological practice. (Also offered as GEOG 404; may not be taken for duplicate credit.)

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 352

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.)

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 420 Technical Issues in Geographic Information Systems 3c-01-3cr
Prerequisite: RGPL 316 or GEOG 419

Uses project-based approach to develop and maintain a geographic information system (GIS). Designs and implements functional systems through cooperative learning. Covers methods for designing GIS to user specification, data collection, data input, project management, and system documentation. (Also offered as GEOG 420; may not be taken for duplicate credit.) (Offered as RGPL 417 before 2016-17.)

RGPL 426 Environmental Land Use Planning 3c-01-3cr
Prerequisite: RGPL 350 recommended

Reviews and instructs 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 the course are 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.

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 462 Planning Policy, Implementation, and Administration 3c-01-3cr
Prerequisite: RGPL 458

Focuses on the planning and implementation of policies to manage the location, timing, type, and intensity of land development. Explores the multi-step process from community plan to project completion. Exposes students to the public environment in which community plans are developed and implemented and walks them through the real-world problems of identifying projects, building agency and interagency consensus, finding funding, putting together a project plan, project management, personnel, and budget to project completion. (Also offered as GEOG 462; may not be taken for duplicate credit.)

RGPL 468 Planning Theory 3c-01-3cr
Prerequisite: RGPL 412

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 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. This non-sectarian approach to religions emphasizes comparisons/contrasts between Western and non-Western religious traditions as well as the contemporary global nature of Western traditions.

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 that are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

RLST 220 Buddhism	3c-01-3cr	RLST 480 Seminar in Religious Studies	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.		Prerequisite: Religious studies 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 religious studies majors and other students by invitation or permission.	
RLST 245 Women and Religion	3c-01-3cr	RLST 481 Special Topics	var-I-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.		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 250 Understanding the Bible	3c-01-3cr	RLST 482 Independent Study	var-1-6cr
An academic introduction to the sacred writings known as the Bible. Acquaints students with the basic contents and major themes of the books of the Bible (Hebrew Bible/Old Testament and New Testament), as well as the goals and methods of the most recent scholarship in biblical studies.		Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost 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 religious studies majors and nonmajors.)	
RLST 290 Christianity	3c-01-3cr	RLST 482 Independent Study: Honors	3c-01-3cr
A study of the beliefs, practices, significant people, history, and cultural impact of Christianity.		Prerequisites: 3.00 GPA, 15cr in RLST, 3.20 GPA in departmental courses Majors in religious studies are invited to take 3cr of independent-study-designated Honors Project. Upon satisfactory completion, graduation with departmental honors is possible.	
RLST 311 Eastern Philosophy	3c-01-3cr	RLST 483 Honors Thesis	var-1-6cr
An examination of texts from East Asia and South Asia that address such philosophical areas as the nature of human knowledge, the nature of reality, and ethics. May include readings from such traditions as Buddhism, Confucianism, Daoism, and/or Hinduism.		Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost 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.	
RLST 329 Philosophy of Religion	3c-01-3cr	RLST 485 Selected Topics in Feminist Studies of Religion	3c-01-3cr
Critically examines temporally and culturally diverse understandings of the human religious impulse. Considers theories regarding the sacred and the existence of divinity, the meaning of being human, the interactions of culture and religious interpretations of human experience, good and evil, authority, knowledge, and ethical responsibility.		Prerequisite: One religious studies or womens and gender studies 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 345 Women in the Bible	3c-01-3cr	RLST 493 Internship in Religious Studies	var-6-12cr
Prerequisite: One religious studies or womens and gender studies 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.		Prerequisites: Junior or senior; religious studies major or double major; 2.5 GPA in major; department approval A supervised experience in a public or private organization that extends and complements course work in religious studies.	
RLST 360 African Religions	3c-01-3cr	SAFE: Safety, Health, and Environmental Applied Sciences	
An examination of the nature of African traditional religion and how traditional religion, Islam, and Christianity coexist and influence one another.		Department of Safety Sciences	
RLST 365 Native North American Religions	3c-01-3cr	College of Health and Human Services	
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 Native North American life-ways. This perspective involves discussion of the clash with Euro-American values and contemporary Native religious responses to social crisis and change. (Also offered as ANTH 365; may not be taken for duplicate credit.)		SAFE 101 Introduction to Occupational Safety and Health	
RLST 373 Advanced Studies in Buddhism	3c-01-3cr	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.		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.	
RLST 375 Religions of India	3c-01-3cr	SAFE 104 Introduction to Safety in the Natural Gas Industry	
A study of Islam including historical and theological foundations, developments of thought, contemporary expressions, and encounters with the modern world.		3c-01-3cr	
RLST 380 Islam	3c-01-3cr	An introduction to safety and health issues in the natural gas industry through the study of historical events and the changes that resulted.	
An introduction to and basic survey of the history, beliefs, traditions, institutions, and practices of Islam, with attention to its development and participation in contemporary societies globally.			

Students gain an understanding of key safety and health programs for the natural gas industry, such as OSHA compliance and workers' compensation, accident investigation, occupational health hazards, emergency response, ergonomics, fleet safety, ethics, and safety program success measurement. Case studies and small group activities prepare students for further in-depth study of these topics and their roles as safety and health professionals.

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 204 Principles of Safety in the Natural Gas Industry 3c-01-3cr

Prerequisite: SAFE 104

Examines safety, health, fire, and environmental issues in the natural gas procurement process by showcasing the complexity of hazard control. Uses applicable OSHA-promulgated standards, American Petroleum Institute standards, and various consensus standards as a basis for understanding hazards and their control requirements, such as the use of personal protective equipment. Emphasis is given to well site construction, layout and equipment, and hazards associated with gas procurement construction and operations, such as fall potential, confined spaces, fire and explosion, trenching and excavation, and health hazards. Safety program implementation and interaction with enforcement agencies is also highlighted.

SAFE 211 Principles of Safety II—Construction Industry 2c-3l-3cr

Prerequisites: SAFE 101; safety, health, and environmental applied sciences majors/minors only or instructor permission

Develops an understanding of hazard recognition, evaluation, prioritization, and control of critical workplace hazards associated with construction. Students are exposed to the complexity of three-dimensional work that exists in the fast-paced construction industry by thoroughly examining elements of safety and health enumerated in the OSHA standards and in various consensus standards. An emphasis is placed on personal protective equipment, electrical safety, scaffolds, fall protection, trenches, and confined space entry including rescue. Practical application of associated hazards and their control strategies is accomplished in laboratory sessions.

SAFE 212 Hazard Prevention Management I 3c-01-3cr

Prerequisites: SAFE 101; safety, health, and environmental applied sciences majors/minors only or instructor permission

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. Also discusses risk management and workers' compensation, as well as workplace violence.

SAFE 215 Safety, Health, and Environmental Communications 3c-01-3cr

Prerequisites: Sophomore standing; safety, health, and environmental applied sciences majors/minors only or instructor permission

Provides students with the ability to apply the theories of learning and communication to aid them in becoming effective oral and written safety, health, and environmental communicators and trainers. Students design and deliver training programs using modern technology and charismatic engagement tools. Students learn, both in writing and orally, how to use communication skills to convince management and employees to embrace and implement safety initiatives and to communicate with regulators and the public regarding safety, environmental, and health issues. Students develop a range of written documents, such as safety, health, and environmental policies, procedures and/or programs, inspection and audit reports, and program and risk assessment and exposure reports, and then communicate summaries of these documents orally. (writing-intensive course)

SAFE 220 Hazardous Materials and Emergency Management 3c-01-3cr

Prerequisites: CHEM 101, SAFE 101, safety, health, and environmental applied sciences majors/minors only 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, properties, regulations, and evaluation. Critical principles of emergency management, including both private and public sector elements, are included.

SAFE 310 Environmental Safety and Health Regulations and Sustainability 3c-01-3cr

Prerequisite: CHEM 101 or instructor permission

Provides a working knowledge of federal environmental legislation and its 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. Provides an understanding of the application of sustainability concepts in the work environment.

SAFE 311 Fire Protection 3c-01-3cr

Prerequisite: CHEM 101 or instructor permission

Teaches 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 hazard and the design of buildings in terms of life safety and fire suppression systems.

SAFE 330 Recognition, Evaluation, and Control of Occupational Health Hazards I 3c-3l-4cr

Prerequisites: CHEM 101; safety, health, and environmental applied sciences majors only or instructor permission

Prerequisite or Corequisite: BIOL 104 or 155

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 335 Industrial and Environmental Stressors 2c-01-2cr

Prerequisites: BIOL 104 or 155, CHEM 101

Focuses on understanding and applying safety, regulatory, toxicological, environmental, and epidemiological information, data, and models to determine occupational risk from exposure to common industrial and environmental stressors. Also covers product safety risk from consumer exposure to manufactured products. Case studies act as important means for presenting and discussing information.

SAFE 345 Process and Systems Safety 3c-01-3cr

Prerequisites: MATH 105 and SAFE 111 or instructor permission

Focuses on the evaluation of system designs using detailed system analysis techniques. Topics include system definition, economics of systems safety, quantitative and qualitative systems safety methodology, and systems safety/process safety program administration. Skills gained include the ability to perform hardware and human factors systems analysis. Techniques include failure mode and effect analysis, hazard and operability studies, what-if and scenario building, and operating and support hazard analysis. Practical analysis work is accomplished through in-class discussion, demonstration sessions, and homework assignments.

SAFE 347 Ergonomics 2c-3l-3cr

Prerequisite: Safety, health, and environmental applied sciences majors only or instructor permission

Prerequisite or Corequisite: BIOL 104 or 155

Explores the principles that control human performance and its effect on 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 361 Air and Water Pollution 2c-01-2cr

Prerequisite: SAFE 220 or instructor permission

Focuses on major aspects of industrial air and water pollution management. Includes sources and analysis of industrial air and water pollution, evaluation and control of air and water pollutants, and atmospheric and water chemistry. Particular emphasis is placed on information that is practical for the safety management, industrial health, or environmental health professional.

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 430 Recognition, Evaluation, and Control of Occupational Health Hazards II 3c-31-4cr

Prerequisites: BIOL 104 or 155, PHYS 111, safety, health, and environmental applied sciences majors only 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 435 Ethics and Professionalism 1c-01-1cr

Prerequisite: Senior standing

Provides a basic understanding of ethics and professionalism related to the occupational safety, health, and environmental profession. Specific topics include the ASSE Code of Ethics, ethical dilemmas that may be experienced in the workplace, expectations regarding professional behavior on internship, and professional growth. Students also learn about safety, health, and environmental professional organizations and certification bodies.

SAFE 488 Internship 12cr

Prerequisites: Senior standing, all required safety sciences courses in major
Student conducts a practicum at an approved occupational setting. Student is required to complete four major projects that 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.

SAFE 493 Internship 6cr

Prerequisites: Senior standing, all required courses in major

Applies hazard assessment and management practices to actual workplace safety issues. A two-hour weekly debriefing session involves the students in developing their written and oral communication skills.

SCI: Science
College of Natural Sciences and Mathematics

SCI 101 Fundamentals of Physics 2c-21-2.5cr

Prerequisite: Early childhood education/special education major or instructor permission

A conceptual course in physics for the non-science major. 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 atom are presented in context with our ev-

eryday experiences. Does not fulfill the Liberal Studies requirement except for majors in early childhood education/special education major.

SCI 102 Fundamentals of Chemistry 2c-21-2.5cr

Prerequisite: Early childhood education/special education major or instructor permission

Surveys chemical principles and concepts for pre-service early childhood/special education majors. A variety of chemical concepts is presented, as well as their applications to technology and society. A series of laboratory exercises and projects will allow student to develop inquiry-based activities for the communication of scientific and chemical concepts with the goal of developing scientific literacy.

SCI 103 Fundamentals of Earth and Space Science 2c-21-2.5cr

Prerequisite: Early childhood education/special education major

Earth science course for early childhood education/special education (ECSP) majors. Introduces concepts and applications of astronomy, geology, oceanography, and meteorology. Includes both lecture and laboratory components with an emphasis on how the earth sciences impact the natural environment. Does not fulfill the Liberal Studies requirement except for majors in early childhood education/special education major.

SCI 104 Fundamentals of Environmental Biology 2c-21-2.5cr

Prerequisite: Early childhood education/special education major or instructor permission

Introduces the major concepts and principles of ecology and their application to modern living. Includes lecture and laboratory components with an emphasis on the content and processes of science. Laboratory exercises reinforce lecture topics as well as the use of laboratory equipment, measuring procedures, experimental design, and the organization, visual representation, and analysis of data.

SCI 105 Physical Science I 3c-21-4cr

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.

SCI 106 Physical Science II 3c-21-4cr

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.

SCI 107 Chemistry for Everyone 3c-01-3cr

A basic course in chemistry for the non-science major. High school chemistry is not a prerequisite. The students develop an understanding and appreciation of the process of science and of the significance of chemistry in everyday life. In addition to basic chemical principles, consumer topics, such as batteries, nuclear chemistry, chemistry of living systems, air, water, energy, and food additives, are covered.

SCI 117 Chemistry for Everyone Laboratory 0c-21-1cr

Prerequisite: Must be taken after or concurrent with SCI 107

A basic laboratory course in chemistry for the non-science major. Laboratory exercises are for the students to develop an understanding and appreciation of the process of science and of the significance of chemistry in everyday life. These laboratory exercises will demonstrate basic chemical principles and will include consumer topics, such as acids and bases, nuclear chemistry, water hardness, and food additives.

SOC: Sociology
Department of Sociology
College of Humanities and Social Sciences

SOC 151 Principles of Sociology 3c-01-3cr

A scientific study of the structure of human societies and the behavior of individual people and groups in society. Examines the relationship between

individuals and societal institutions, processes, and interactions. Provides an overview of the discipline, including key concepts, main theoretical perspectives, the methods and research findings of sociologists, and social inequalities. Meets Social Science requirement for Liberal Studies. SOC 151 and 161 may be substituted interchangeably for D/F repeats. SOC 151 and 161 may not be used for duplicate credit. SOC 161 is required for the Effective Teamwork and Communication minor.

SOC 161 Foundations of Sociology: Social Relations in Groups and Organizations 3c-01-3cr

Studies the structure of human societies and the behavior of individual people, groups, and teams in society. Examines the relationship between individuals and societal institutions, processes, and interactions with emphasis on the ways power/status are reflected. Explores the relationship between individual identity and team dynamics as it pertains to race, gender, class, sexuality, ability, and age while relating to the methods and research findings of sociologists. Applies decision-making and problem-solving as members of a small teams working to achieve a shared objective within a larger organizational context. For those seeking a minor in Effective Teamwork and Communication. Meets Social Science for Liberal Studies. SOC 151 and 161 may be substituted interchangeably for D/F repeats, but SOC 161 is required for the Effective Teamwork and Communication minor. SOC 151 and 161 may not be used for duplicate credit.

SOC 231 Contemporary Social Problems 3c-01-3cr

Using a sociological perspective, this course will examine pressing social problems as they relate to race, class, and gender in contemporary American society. Such problems may include various issues such as poverty, delinquency, substance abuse, crime, divorce, and others. These issues are considered through multiple lenses, including historical, economic, and social, with connections to current social policy.

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 161 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 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 300 Skills for Using Sociology in Your Career and Community 3c-01-3cr

Prerequisite: SOC 151 or 231

Develops a variety of skills that sociologists bring to the workplace, including research literacy, application of theory and research, and professional writing. Explores the wide range of careers and other endeavors to which these skills may be applied. Utilizes concrete activities and practical use of knowledge and skills that will aid in future coursework, and in making valuable contributions to organizations in the public, private, and nonprofit sectors.

SOC 314 Sociology of Native Americans 3c-01-3cr

An introduction to the history, "traditional" cultures, and changes brought by European settlement and American conquest and the range of social issues faced by contemporary Native Americans on and off reservations. A

special emphasis is placed on the efforts of indigenous Indian societies to maintain and regain access to land and other resources. Activist responses are considered along with the social consequences of past and present initiatives and policies.

SOC 320 Sociological Theory 3c-01-3cr

Prerequisites: SOC 151 or 161; second-semester sophomore standing

A detailed survey of the historical development of sociological theory from the mid-19th 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 interaction, ethno-methodology, 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 or 161

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 or 161

A study of family dynamics and patterns using sociological research methods and theories. Examines social, cultural, and historical changes that have altered the nature of family life and created challenges for public policy. Addresses contemporary problems and issues encountered by families and approaches to dealing with these problems.

SOC 337 Society, Globalization, and Risk 3c-01-3cr

Prerequisite: One of the following: ANTH 110, ECON 101, 121, GEOG 230, HIST 202, PLSC 101, 282, SOC 151, 161

Examines the factors driving globalization, and the risks associated with globalization, on both a local and international level. Foundations for thinking in global terms are provided through an overview of historical developments and major international actors that have shaped current global society. Focuses on major challenges and risks facing global society. Throughout, students are encouraged to connect their own personal life experiences to the broader global context. (Titled World Societies and World Systems before 2014-15.)

SOC 341 Sociology of Education 3c-01-3cr

Prerequisite: SOC 151 or 161

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 345 Interpersonal Dynamics 3c-01-3cr

Prerequisite: SOC 151 or 161

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 or 161

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.

<p>SOC 352 Sociology of Religion 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOC 417 Global Service Learning 3c-01-3cr Prerequisites: SOC 151 or 161 or instructor permission A forum for critical reflection on community-driven service, cross-cultural experiences, and global citizenship. Progresses through a framework, which explicitly links personal experience and readings with regular writing assignments in a journal and class discussion. Reflects on both the purposes of their service work as well as on its limits as a response to specific needs within the community, and more general problems of social justice. Through the experience of interaction and reflection, students learn to apply knowledge and skills in the real world, exercise critical thinking, develop self-learning and helping skills, develop societal knowledge and sensitivity, and enhance personal development. Explores issues of social responsibility and citizenship in relation to the social problems with which they become acquainted through their community work.</p>
<p>SOC 357 Sociology of Aging and the Life-course 3c-01-3cr Prerequisite: SOC 151 or 161 An introduction to the various problems faced in the process of growing older including ageism, social support, elder abuse, financial exploitation, etc. Attitudes of society toward the elderly and the social and cultural impact of an aging US population are examined</p>	<p>SOC 421 Sociology of Mass Media 3c-01-3cr Prerequisite: SOC 151 or 161 Examines the development of mass media as dominant cultural forms within advanced industrial societies in the 21st century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.</p>
<p>SOC 361 Social Stratification 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOC 427 Social Perspectives on Intimate Partner Violence 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>
<p>SOC 362 Racial and Ethnic Minorities 3c-01-3cr Prerequisite: SOC 151 or 161 Examines from a historical and comparative perspective the experiences of minority groups, with special emphasis on economic and political domination, stereotyping, prejudice, and discrimination. Techniques of majority group domination and the responses of minority groups are discussed. Various reasons for the different rates and patterns of assimilation are explored.</p>	<p>SOC 428 Child Abuse 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>
<p>SOC 363 Sociology of Gender 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOC 442 Medical Sociology 3c-01-3cr Prerequisite: SOC 151 or 161 A review of medical sociology. Focuses on the sociological examination of health, illness, and healing; health inequalities; medicalization; medicine as a profession; healing occupations; interactions within medical settings; the social organization of health services; and bioethics. Examines current, major issues in public policy and healing. (Offered as SOC 342 prior to 2015-16.)</p>
<p>SOC 387 Social and Cultural Change 3c-01-3cr Prerequisite: SOC 151 or 161 An exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.</p>	<p>SOC 448 Social Welfare Policy 3c-01-3cr Prerequisite: SOC 151 or 161 Focuses on the formation of social welfare programs in the United States, 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.</p>
<p>SOC 391 Foundations of Sociological Practice 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOC 450 Health Disparities 3c-01-3cr Prerequisite: SOC 151 or ANTH 211 or instructor permission Explores health status and healthcare disparities across groups based on race/ethnicity, gender, socioeconomic status/social class, nativity, refugee and citizen status, and other cultural and demographic characteristics. Uses a social determinants of health perspective to consider how social, cultural, environmental, political, and economic conditions produce unequal and inequitable health outcomes, with special focus on disadvantaged populations. Addresses agency and empowerment of populations seeking and accessing health and healthcare. Includes different levels of public health interventions that can improve health outcomes, better calibrate access to healthcare, and improve health equity within populations. (Also offered as ANTH 450; may not be taken for duplicate credit.)</p>
<p>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 before taking SOC 392 other than SOC 151, 320, 460, and 461.</p>	
<p>SOC 410 Men and Masculinities 3c-01-3cr Prerequisite: SOC 151 or 161 or instructor permission Explores constructs of masculinity within the context of US culture using a sociological lens. Examines the notion that there are multiple masculinities that intersect with a range of areas including race, ethnicity, class, sexuality, and gender identity. Evaluates the influence of social contexts and roles on behavioral expectations for men and boys. Analyzes implications for society and individual men.</p>	

<p>SOC 452 Disability and Society 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOC 493 Internship in Sociology var-3-12cr Prerequisites: 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 or 161, 320, 391, 392, and 6cr within substantive area General Sociology Track Prerequisites: Grade of “C” or better in SOC 151 or 161, 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 or 161, 320, 460, 461, and 6cr within substantive area Sociology of Disability Services Track Prerequisites: Grade of “C” or better in SOC 151 or 161, 320, 391, 392, 452, EDEX 111 A supervised experience in a public or private organization that extends and complements course work at the university.</p>
<p>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.</p>	<p>SOWK: Social Work Department of Sociology College of Humanities and Social Sciences</p>
<p>SOC 458 Political Sociology 3c-01-3cr Prerequisite: SOC 151 or 161 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.</p>	<p>SOWK 238 Introduction to Social Work 3c-01-3cr Prerequisite: ANTH 110 or SOC 151 or 161 An introduction to the dynamics of helping relationships.</p>
<p>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.</p>	<p>SPAN: Spanish Department of Foreign Languages College of Humanities and Social Sciences</p>
<p>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.</p>	<p>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. May not register for or take a D/F repeat in SPAN 101 when credit has already been received for a higher-numbered Spanish course.</p>
<p>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.</p>	<p>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. Liberal Studies credit is given. Attendance is required. May not register for or take a D/F repeat in SPAN 102 when credit has already been received for a higher-numbered course.</p>
<p>SOC 482 Independent Study var-1-3cr Prerequisites: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost 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.</p>	<p>SPAN 201 Intermediate Spanish 4c-01-4cr Prerequisite: SPAN 102, or the equivalent as established by departmental placement examination 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. No student is allowed to register for or take a D/F repeat in SPAN 201 when credit has already been received for a higher numbered Spanish course.</p>
<p>SOC 483 Honors Thesis var-1-6cr Prerequisites: Admission to departmental honors program; prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost 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.</p>	<p>SPAN 220 Intermediate Spanish Conversation 3c-01-3cr Prerequisite: SPAN 201 or equivalent Intensive work or oral communication skills with emphasis on spontaneous interpersonal speaking, discourse strategies, vocabulary building, and pronunciation. Liberal Studies credit is given. Required for all majors and minors. No student is allowed to register for or take a D/F repeat in SPAN 220 when credit has already been received for a higher number Spanish course.</p>
	<p>SPAN 230 Intermediate Spanish Composition and Grammar 3c-01-3cr Prerequisite: 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</p>

and minors. Meets Liberal Studies requirement for a writing-intensive course for majors.

SPAN 244 Modern Mexico **3c-01-3cr**

Prerequisite: SPAN 201 or equivalent and participation in the Mexico Summer Study Abroad Program

Taught in Mexico as part of the IUP Mexico study abroad program; introduces the contemporary culture of Mexico. Provides a cultural perspective within which to understand current phenomena. Exposes students to readings on cultural and historical topics, current events, and folkloric narratives. Complements firsthand experience gained through field trips and through living with a Mexican family. Course is taught in Spanish on-site in Mexico and online.

SPAN 260 Introduction to Hispanic Literature **3c-01-3cr**

Prerequisite: 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.

SPAN 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.

SPAN 330 Advanced Spanish Composition and Grammar **3c-01-3cr**

Prerequisite: SPAN 230 or equivalent

Extensive work on the development of written expression and communication at the “advanced level” of proficiency in Spanish, as defined by the American Council on the Teaching of Foreign Languages, together with the study of advanced-level structures. Taught in Spanish.

SPAN 340 Hispanic Cultures into the 19th Century **3c-01-3cr**

Prerequisite: SPAN 230 or equivalent

An introduction to the significant aspects of the cultures of both Spain and Spanish America. Elements for explanation and discussion are drawn from artistic, literary, religious, geographic, social, and political manifestations of Hispanic cultures as they have revealed themselves through the early 19th century. Taught in Spanish. (Titled Hispanic Civilization through the 19th Century before 2016-17.)

SPAN 342 Spanish Cultures from the 19th Century to the Present **3c-01-3cr**

Prerequisite: SPAN 230 or equivalent

Analyzes the major cultural trends in 19th-, 20th-, and 21st-century Spain as they relate to its current problems, aspirations, and values. Draws elements for explanation and discussion 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.) (Titled 20th-Century Spanish Civilization and Culture before 2016-17.)

SPAN 344 Spanish-American Cultures from the 19th Century to the Present **3c-01-3cr**

Prerequisite: SPAN 230 or equivalent

Analyzes the major cultural trends in Spanish America as they relate to its position in the world, starting with the independence movements of the early nineteenth century, through the 20th century to the present. Draws elements for explanation and discussion from social, political, artistic, literary, religious, and geographic manifestations, including indigenous and African cultural influences. Taught in Spanish; offered alternate years. (Titled 20th-Century Spanish-American Civilization and Culture before 2016-17.)

SPAN 350 Advanced Spanish Conversation **3c-01-3cr**

Prerequisite: SPAN 230 or equivalent. 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.

SPAN 354 Commercial Spanish **3c-01-3cr**

Prerequisite: 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.

SPAN 362 Survey of Peninsular Literature **3c-01-3cr**

Prerequisite: 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.

SPAN 364 Survey of Spanish-American Literature **3c-01-3cr**

Prerequisite: 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.

SPAN 382-389 Pennsylvania-Valladolid Program **18cr**

Prerequisites: SPAN 230 and 260 or permission

Contact chairperson, Department of Foreign Languages. Courses taken in Valladolid include SPAN 382-389 and SPAN 482 (3cr). Descriptions follow.

SPAN 382 Contemporary Spain **3c-01-3cr**

Prerequisites: SPAN 230 and 260 or permission

Gives a general view of Spain today in the areas of society, economy, and political institutions. (See SPAN 342)

SPAN 383 Geography and History of Spain **3c-01-3cr**

Prerequisites: SPAN 230 and 260 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 15th century to the present with special emphasis on today's Spanish institutions.

SPAN 384 History of Spanish Art **3c-01-3cr**

Prerequisites: SPAN 230 and 260 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.

SPAN 385 Survey of Spanish Literature **3c-01-3cr**

Prerequisites: SPAN 230 and 260 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 20th-century literature.

SPAN 389 Theory and Practice of Spanish Language **3c-01-3cr**

Prerequisites: SPAN 230 and 260 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.

SPAN 390 Teaching of Elementary Content through the Spanish Language **3c-01-3cr**

Prerequisite: 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 that 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.

SPAN 402 Translation and Interpretation 3c-0I-3cr

Prerequisites: SPAN 230, 350

Fundamental translation skills for use in business and industry as well as in academic and popular fields.

SPAN 404 Advanced Spanish Grammar 3c-0I-3cr

Prerequisites: SPAN 230, senior standing or department permission

An in-depth study of Spanish syntax and morphology. Taught in Spanish.

SPAN 410 Medieval Literature 3c-0I-3cr

Prerequisite: 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.

SPAN 411 Golden Age Spanish 3c-0I-3cr

Prerequisite: 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.

SPAN 412 The Spanish Novel of the 19th and 20th Centuries 3c-0I-3cr

Prerequisite: SPAN 260 or permission

An analysis of selected novels from three major periods: the 19th century, the Generation of 1898, and the post-Civil War. Taught in Spanish.

SPAN 413 Spanish Poetry of the 19th and 20th Centuries 3c-0I-3cr

Prerequisite: SPAN 260 or permission

The study and analysis of lyric poetry in Spain from 19th-century poetry through modernism and its evolution to the present. Taught in Spanish.

SPAN 420 Modern Hispanic Theater 3c-0I-3cr

Prerequisite: 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.

SPAN 421 Modern Hispanic Short Story 3c-0I-3cr

Prerequisite: SPAN 260 or permission

The critical analysis of short stories by Spanish and Spanish-American authors. Taught in Spanish; offered in four-year rotation.

SPAN 430 20th-Century Spanish-American Prose 3c-0I-3cr

Prerequisite: 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.

SPAN 431 Spanish-American Poetry 3c-0I-3cr

Prerequisite: SPAN 260 or permission

A study of Spanish-American poetry from its early manifestations through modernism, post-modernism, and avant-garde. Taught in Spanish.

SPAN 450 Conversation Forum 3c-0I-3cr

Prerequisite: SPAN 350 or equivalent

Extensive work on the development of speaking skills at the "Advanced" 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.

SPAN 453 Spanish Phonetics and Phonemics 3c-0I-3cr

Prerequisite: 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 record-

ings, study of Spanish dialects, and linguistic analyses. Taught in Spanish. Required for Spanish education K-12 majors; highly suggested for Spanish majors.

SPAN 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.

SPAN 482 Independent Study var-1-6cr

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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 Office of the Provost

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.

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 Spanish Department. Maximum of 6cr can be applied toward a major.

SPLP: Speech Pathology and Audiology
Department of Communication Disorders, Special
Education, and Disability Services
College of Education and Communications

SPLP 111 Introduction to Communication Disorders 3c-0I-3cr

Prerequisite: Major in speech-language pathology and audiology or minor in audiology

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-0I-3cr

Prerequisite: Speech-language pathology and audiology major

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-0I-3cr

Prerequisite: Speech-language pathology and audiology major or audiology minor

The study of auditory function, anatomy, and physiology of the auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for children with hearing loss.

SPLP 242 Speech Science I: Theory and Measurement 3c-0I-3cr

Prerequisite: Speech-language pathology and audiology major

Corequisite: SPLP 251

An introduction to the theoretic properties, biological characteristics, and physical analysis of human speech production, speech perception, and swallowing. Content is integrated into applications of clinical instrumentation and measurement.

SPLP 251 Anatomy and Physiology of Speech and Swallowing 3c-01-3cr

Prerequisite: Speech-language pathology and audiology major
Corequisite: SPLP 242

Examines the structure and function of the body systems involved in speech production (i.e., respiration, phonation, articulation) and swallowing and an introduction to the nervous system. Normal variances based on age, gender, and race are included. Comparisons between normal and disordered clinical presentations are introduced.

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 special education and suggested for majors in elementary education.)

SPLP 275 Language Science 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major, SPLP 111
Addresses the structure of language and the cognitive processes underlying normal language behavior. Applications to various clinical populations are also addressed. Prerequisites include an introductory course in communication disorders.

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 310 Observation in Communication Disorders I 1c-01-1cr

Prerequisites: Speech-language pathology and audiology majors with junior standing

Provides a context for observation of individuals of all ages receiving speech-language pathology or audiology services. Principles of observation, as well as assessment, prevention, and intervention are discussed.

SPLP 311 Aural Rehabilitation 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major with junior standing, or audiology minor

An examination of the effects of hearing loss at different stages of development and the technology and rehabilitative procedures used with hard-of-hearing and deaf children and adults.

SPLP 312 Advanced Audiology and Hearing Disorders 3c-01-3cr

Prerequisite: SPLP 222

Contains advanced audiological topics concerning auditory function; types and causes of hearing disorders; advanced evaluation procedures and techniques for hearing; and social, emotional, and educational impacts of various auditory disorders on adults and children.

SPLP 334 Language Development 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major, junior standing

The study of development of an interpersonal communication system; language as a system of symbols for communication; the structure of the English language, including phonology, syntax, semantics. Highlighting of neurological, social, and psychological bases of language development.

SPLP 342 Neuroscience for Communication Disorders 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major, junior standing

An overview of the basic anatomy of the central nervous system and its control of human swallowing and communication. Includes the biological science principles of speech and language processing and neurogenic communication and swallowing disorders in children and adults. (Titled Speech Science II Neuroscience before 2016-17.)

SPLP 401 Communication and Social Competence for Children with Autism 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major with junior standing, or instructor permission

Examines the interplay among cognition, language, and communication in children and adolescents with autism spectrum disorders (ASD). A team approach is emphasized outlining the roles of parents, speech-language pathologists, special education teachers, classroom teachers, school psychologists, and school administration. Methods for assessment of and intervention for language and social communication skills are introduced. Clinical methods that can facilitate social skills, play, and friendships with peers are emphasized.

SPLP 406 Clinical Management of Articulation and Language 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major, junior standing, SPLP 334

An introduction to the principles and practices for assessment and intervention of articulation/phonology and language disorders using a variety of experiences that allow students to practice applying their clinical skills to practical situations. An overview of diagnostic tools, assessment principles and techniques, and intervention principles and techniques as related to a variety of articulation/phonology and language disorders.

SPLP 408 Organic Disorders 3c-01-3cr

Prerequisites: Speech-language pathology and audiology major, junior standing

Introduces the theoretic foundations, clinical characteristics, diagnostic procedures, and treatment options for three subspecialties in speech-language pathology: stuttering, voice disorders, and dysphagia.

SPLP 410 Observation in Communication Disorders II 1c-01-1cr

Prerequisite: SPLP 310

A focused observation of patients receiving speech-language pathology or audiology services. Discusses professional codes of ethics, principles of observation, assessment, prevention, and intervention. Provides supervised services to one patient in the IUP Speech, Language, and Hearing Clinic.

SPLP 412 Organization and Administration of Speech, Language, and Hearing Programs 3c-01-3cr

Prerequisites: SPLP 111; Junior status (60 or more credits), 3.25 GPA

Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools and health care settings. Techniques of client identification, scheduling, record-keeping, appropriate referral, material and equipment selection, counseling, and the development of coordinated professional and interdisciplinary procedures are covered. Emphasis is given to issues of ethical practice and cultural diversity.

SPLP 420 Undergraduate Clinic 1c-01-1cr

Prerequisites: Junior standing, program director's permission

An experience in working with individuals or groups of persons who exhibit speech, language, or hearing problems. Treatment planning, documentation, and service delivery.

SPLP 422 Central Auditory Processing Disorders in the Educational Setting 3c-01-3cr

Prerequisite: SPLP 222

Includes three sections: (1) introductory information about central auditory processing disorders (CAPD), (2) screening instruments and test batteries used by audiologists and speech-language pathologists, and (3) management and remediation options used by professionals, parents, and children with the diagnosis. The introductory information covers the characteristics, causes, comorbid conditions, influences on, and prevalence of CAPD. The various models and profiles of auditory processing disorders are presented. The personnel responsible for a multidisciplinary approach to assessing and treating CAPD are discussed. Terminology used by audiologists and SLPs is presented, as well as anatomical and physiological aspects of central auditory processing. Covers samplings of test materials commonly used in clinics, and (if time allows) students get hands-on practice administering screenings and diagnostic tests. The final third of the class focuses on

environmental modifications, remediation activities, and compensatory strategies used by therapists for CAPD diagnoses.

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.

SUST: Sustainability Studies
Colleges of Humanities and Social Sciences and Natural Sciences and Mathematics

SUST 201 Introduction to Sustainability Studies 3c-01-3cr

Keystone course for students pursuing a minor in Sustainability Studies. To live sustainably is to aspire for balance with the environment in a society that seeks equality, justice, and the well-being of all species. Considers definitions of sustainability and introduces the principles, histories and practices of sustainability through a critical combination of interdisciplinary, global, and multicultural perspectives. Enables grappling with major, interdependent social, economic, cultural, and environmental contexts and issues related to sustainability. Engages in a praxis-based problem-solving research project, which addresses a core set of current sustainability issues emerging in local, regional, national, and global contexts.

SUST 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.

SUST 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.

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 its major conceptual and aesthetic underpinnings, 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. Meets Fine Arts requirement for Liberal Studies. THTR 101 and 161 may be substituted interchangeably for D/F repeats. THTR 101 and 161 may not be used for duplicate credit. THTR 161 is required for the Effective Teamwork and Communication minor.

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: Theater 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 theater from the actor's point of view. Through practical application, students develop personal and professional skills that enhance oral communication, self-presentation, and self-confidence. Students also develop the ability to respond knowledgeably to theatrical productions as an audience member.

THTR 140 Foundations of Performance 3c-01-3cr

An intensive, experiential workshop that introduces and explores fundamental components of theatrical performance (vocal, physical, ensemble, imaginative, analytic) in a holistic sequence of exercises and projects. Provides incoming theater majors with a common set of foundational theater skills and knowledge, a theatrical vocabulary, and collaborative ensemble interaction that enriches the freshman experience. As students progress, whether on a performance track or in other areas, this course gives them a shared context from which to grow as theater artists.

THTR 161 Introduction to Theater: Interpersonal Practices 3c-01-3cr

Explores the theater arts, examines its major conceptual and aesthetic underpinnings, 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. Analyzes examples of interpersonal relations of teams using dramatic literature, and implement primary acting and directing tools in discovering solutions to challenges in interpersonal relations. Designed for those seeking a minor in Effective Teamwork and Communication. Meets Fine Arts for Liberal Studies. THTR 101 and 161 may be substituted interchangeably for D/F repeats, but THTR 161 is required for the Effective Teamwork and Communication minor. THTR 101 and THTR 161 may not be used for duplicate credit.

THTR 211 History and Literature: Classical 3c-01-3cr

A lecture course that surveys Western theater from its origins through the ancient Greeks to medieval times. Students examine styles and genres of the period through the work of playwrights, actors, and theorists. Includes the study of cultural, social, political, and economic contexts of Western theater in this period; contextual comparisons to Eastern theater of the same era; as well as the changes in performance practice, the architecture of performance space, theater technology, and audience composition.

THTR 212 History and Literature: Renaissance 3c-01-3cr

Surveys Western theater from the Renaissance to the Industrial Revolution. Examines styles and genres of the period through the work of playwrights, directors, actors, designers, and theorists. Includes the study of cultural, social, political, and economic contexts of Western theater in this period, as

well as the changes in performance practice, the architecture of performance space, theater technology, and audience composition.

THTR 213 History and Literature: Modern and Contemporary **3c-01-3cr**

Surveys Western theater from the late 19th century to the present. Examines styles and genres of the period through the work of playwrights, directors, actors, designers, and theorists. Includes the study of cultural, social, political, and economic contexts of Western theater in this period, as well as the changes in performance practice, the architecture of performance space, theater technology, and audience composition.

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 225 Theater Graphics **1c-3l-3cr**

A practical introduction to hand drawing, drafting, and graphic technology applied to theater design, technology, and stage management.

THTR 226 Stage Management **3c-01-3cr**

Prerequisite: THTR 111 or instructor permission

A practical survey of stage management as it pertains to theater, dance, and opera productions. Covers the role of the stage manager from pre-production to post-production as well as the techniques, communication methodology, practices, and standard theater terminology.

THTR 231 Improvisation and Creativity **3c-01-3cr**

Prerequisite: THTR 140 or instructor permission

Introduces short- and long-form improvisation techniques and scene practice. Explores an overview of improvisatory styles and practitioners. Analyzes how social mores, world events, and prevailing attitudes shaped and continue to shape the world of improvisational theater throughout theater history. Studies and practice culminate in final improvisation performance project.

THTR 240 Acting I **3c-01-3cr**

Prerequisite: THTR 140

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 theater 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 playwriting) 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 311 Dramaturgy **3c-01-3cr**

An introduction to the study and profession of dramaturgy. A study of the historical significance of the dramaturg through the reading of early and modern practitioners. An examination of a number of critical theories that students will use to contextualize play scripts under study. Performance of such dramaturgical tasks as identifying script references, historicizing social conventions and customs, comparing translations of notable foreign plays, preparing information packets for actors, directors, and design teams, draft-

ing program notes, and organizing talkbacks. An opportunity to provide services for a department production. (Cross-listed as ENGL 309.)

THTR 313 American Theater Between the Wars **3c-01-3cr**

Surveys popular and significant American plays written and produced in the 1920s and 1930s. Examines theatrical styles, trends, and themes that reflect the era's values and the challenges and threats to those values. Analyzes and compares the work of playwrights, directors, performers, and designers within the historical and social contexts of the past Great War and the impending Second World War, as well as formulates comparisons to the world of the 21st century.

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 340 Acting II **3c-01-3cr**

Prerequisite: THTR 240

A continuation of the study of Stanislavski system, focusing on his primary texts, toward 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 that prepares students to perform in Shakespeare's plays. A background overview of the Elizabethan period in addition to various methods toward approaching the movement, language, and verse forms from an actor's point of view.

THTR 347 Playwriting **3c-01-3cr**

Prerequisite: THTR 111 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/F repeats but may not be counted for duplicate credit.

THTR 350 Directing **3c-01-3cr**

Prerequisites: Minimum of THTR 240 and instructor permission. Written application to the instructor is required.

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 361 The Performance of Caring **3c-01-3cr**

Prerequisite: Priority enrollment for Nursing and Allied Health majors, or by instructor permission

Using acting skills to engender healing relationships. A creative, empathetic, and practical approach to preparing future healthcare professionals with enhanced skills in the art of establishing and building patient and colleague relationships. Content is delivered, and student learning is facilitated, through the use of approaches common to the training of performing artists.

THTR 371 Musical Theater History **3c-01-3cr**

Surveys the development of musical theater as a performing art form in America. Examines the ways musicals both reflect and embody values, tastes, and trends from their respective historical eras. Explores musical theater from historical, political, social, and aesthetic perspectives. Focuses on the beginnings of musical theater to the present with emphasis on the cultural development and impact of the art form.

THTR 372 Musical Theater Auditioning **3c-01-3cr**

Prerequisite: THTR 240 or instructor permission

Introduces the study of audition techniques for musical theater, music, scene, and lyric analysis, and characterizations addressed. Enhances and improves audition and performance skills as well as the ability to find and choose appropriate audition material.

THTR 373 Musical Theater Scene Study **3c-01-3cr**

Prerequisite: THTR 240 or instructor permission

An intensive text and score analysis in relation to the process of characterization for the actor, singer, dancer in musical theater focused through musical scene work into song performance. In addition, basic insights and strategies for a professional career in theater are presented.

THTR 471 Musical Theater Performance **3c-01-3cr**

Prerequisite: THTR 240 or instructor permission

For more advanced acting and musical theater students interested in developing musical theater skills in a rehearsal/production format. Using a contemporary American musical chosen by the instructor, students are taught to apply acting, singing, and dance techniques to bring characters to life on stage. Class culminates in a final performance but will focus more on the text, the music, and the fullness of the characterizations as opposed to the technical elements of the production.

THTR 480 Theater Seminar **1c-01-1cr**

Prerequisites: THTR 111, 486, senior standing

Capstone course for majors. Students complete work on their senior thesis project and examine career options. Students develop résumés, portfolios, and other materials particular to their education as a theater or dance artist and their aspirations for a career or postgraduate studies in a creative field. Offered fall semester only.

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 Office of the Provost

Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evi-

dence 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 484 Directing Studio **3c-21-3cr**

Prerequisites: THTR 350 or instructor permission. Written application to the instructor is required.

An opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness, as well as program resources. The focus is on practical application of directing principles to specific issues. Student projects are performed in public, open-class recitals. May be repeated.

THTR 486 Practicum in Production **var-0-3cr**

Prerequisite: Theater major standing or instructor permission

An opportunity with academic credit to make significant contributions to campus productions augmenting theater course work 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 theater majors for a minimum of six semesters, one of which must be a final project for senior majors.

THTR 487 Acting Studio **3c-01-3cr**

Prerequisites: Minimum of THTR 240 or instructor permission. Written application to the instructor may be required when necessary.

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, stage combat, physical theater, and acting for the camera as alternating semester options. May be repeated with a different focus each time.

THTR 489 Design/Technology/Management Studio **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 stage management, set props, media makeup, technical drawing/mixed media, costume technology, and scene painting. May be repeated with each different topic area.

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.

TMWK: Effective Teamwork and Communication Studies
Academic Affairs Division

TMWK 461 Teamwork and Communication Capstone **1c-01-1cr**

Prerequisite: Any independent study, undergraduate research, or honors thesis (may be taken concurrently)

Capstone course for those minoring in effective teamwork and communication. Reflective nature of the course builds on core foundational material and in-major teamwork experiences. Emphasizes development of students' philosophies of teamwork and communication through reflection and practice. Coupling of in-major independent study, undergraduate research, or honors thesis, by means of an interdisciplinary, semester-long project enhances real-world team experiences valued by future employers and graduate programs. Promotes the importance of showcasing team and communication skills to future employers through resume, cover letter, and portfolio.

**UVWD: University-wide 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 area. 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 Academic Affairs office. Open to any IUP major. See description under Academic Affairs area. Concurrent seminar course required. See UVWD 480.

**VOED: Vocational Education
Center for Career and Technical Personnel Preparation
College of Education and Communications**

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 (CTE) 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, 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 301 Integrating Math and Science in Career and Technical Education 3c-01-3cr

Prerequisite: Completion of course work 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 are 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 course work 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 are 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 are discussed. The emphasis is 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 0c-01-0cr

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 402 Special Topics in Vocational Pedagogical Preparation var-1-15cr

Prerequisite: Center permission
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 course work 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 is 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 are included along with formative and summative assessment.

VOED 404 Research in Career and Technical Education **3c-01-3cr**

Prerequisite: Completion of course work 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 course work 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 affecting 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.

WGS: Women's and Gender Studies
Women's and Gender Studies Program
College of Humanities and Social Sciences

WGS 200 Introduction to Women's and Gender Studies **3c-01-3cr**

An interdisciplinary, cross-cultural survey of the ways in which gender interacts with race, age, class, ethnicity, nationality, and other dimensions of identities to shape human consciousness and determine the social, political, and cultural organizations of human institutions and societies.

WGS 301 Asian American and Asian Diasporic Women's Literature **3c-01-3cr**

Introduces more than 100 years of the unique, diverse, and dynamic literary tradition of the 20th and 21st century Asian American and Asian diasporic women's literature in a wide range of Asian cultural, historical, national, global, and American multiethnic contexts. Intersects and is enriched by gender, race, ethnicity, class, sexuality, language, immigration, global migrant labor, citizenship, decolonization, as well as Asian indigenous and ethnic women's histories.

WGS 400 Feminist Theories **3c-01-3cr**

Introduces the vigorous, interdisciplinary, complex, and diverse intellectual history of feminist theories, methodologies, and politics. Includes classical feminist advocacy from early centuries to feminist theories in early 21st century, from Euro-American feminist philosophical traditions to the more global, multicultural, intersectional, and continuously multidisciplinary feminist criticisms, with rich dialogues crossing periods and borders. Intersects and is enriched by multiple critical categories of gender, sexuality, class, race, ethnicity, nation, culture, knowledge, and power. Stimulates, engages with, and empowers students. Encourages students to actively apply feminist knowledge to their own cross-disciplinary learning, personal growth, empowerment, and activist social transformation.

WGS 482 Independent Study **var-1-3cr**

Prerequisite: Prior approval through advisor, faculty member, department chairperson, dean, and Office of the Provost

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.

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Note: All IUP personnel and students can be found in the online directory at <http://search.people.iup.edu>.

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Food and Nutrition: Mary Ann Cessna, Susan S. Dahlheimer, Margaret L. Minnick, Joanne B. Steiner

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Marketing: Ronald M. Weiers

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Sociology/Anthropology: Betty B. Lanham

Sociology: Robert J. Ackerman, Rosalyn B. Darling, Edward W. Gondolf, Robert B. Heasley, Harvey S. Holtz, Herbert M. Hunter, Thomas C. Nowak, Kay A. Snyder

Spanish and Classical Languages: Victor S. Drescher, David A. Foltz, Cruz M. Mendizábal

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Student Development: Sherrill A. Kuckuck

Student Personnel: James W. Laughlin

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Theater and Dance: Barbara A. Blackledge, Donald G. Eisen, Patricia L. Lommock, Edward K. Simpson

The Faculty

Abigail R. Adams, PhD, University of New Mexico
Assistant Professor, Anthropology

Frederick A. Adkins, PhD, University of Iowa
Professor, Mathematics

Ibrahim J. Affaneh, PhD, University of Utah
Professor, Chairperson, Finance and Legal Studies

Francisco E. Alarcón, PhD, University of Iowa
Professor, Chairperson, Mathematics

Abbas J. Ali, PhD, West Virginia University
Distinguished University Professor and Professor, Management

Azad I. Ali, DSc, Robert Morris University
Professor, Information Systems and Decision Sciences

Parveen J. Ali, DEd, Indiana University of Pennsylvania
Associate Professor, Developmental Studies

Sanwar Ali, PhD, Texas Christian University
Professor, Computer Science

Francis Allard, PhD, University of Pittsburgh
Associate Professor, Anthropology

Robert E. Alman, DEd, Indiana University of Pennsylvania
Assistant Professor, Kinesiology, Health, and Sport Science

Hussam Ahmad Al-Shammari, PhD, University of Texas at Arlington
Professor, Management

Sekhar Anantharaman, PhD, University of Central Florida
Professor, Chairperson, Accounting

John A. Anderson, PhD, University of New Hampshire
Professor, Sociology

Kim L. Anderson, PhD, University of Pittsburgh
Associate Professor, Accounting

Julie W. Ankrum, PhD, University of Pittsburgh
Assistant Professor, Professional Studies in Education

Paul-Marie T. Arpaia, PhD, Georgetown University
Associate Professor, History

Colin A. Ashe, PhD, Massachusetts Institute of Technology
Assistant Professor, Chemistry

W. Timothy Austin, PhD, University of Georgia
Professor, Criminology and Criminal Justice

Christine D. Baker, PhD, University of Texas at Austin
Assistant Professor, History

Maria R. Barefoot, MLS, University of Pittsburgh
Assistant Professor, University Libraries

William F. Barker, PhD, University of Pennsylvania
Professor, Educational and School Psychology

Robert W. Baron, MS, Indiana University of Pennsylvania
Assistant Professor, Intercollegiate Athletics

Madan M. Batra, PhD, University of Wisconsin—Madison
Professor, Marketing

Anthony J. Battaglia, MA, Indiana University of Pennsylvania
Assistant Professor, Culinary Arts

Jessica S. Baum-Mehus, MS, Ohio University
Assistant Professor, Intercollegiate Athletics

Matthew R. Baumer, PhD, University of North Carolina at Chapel Hill
Associate Professor, Music

Alan T. Baumler, PhD, University of Illinois at Urbana—Champaign
Professor, History; Coordinator, Committee of Asian Studies

Joseph R. Baunoch, DMA, Michigan State University
Associate Professor, Music

Charlene P. Bebko, PhD, University of Pittsburgh
Professor, Marketing

Ryan N. Beeken, DMA, Michigan State University
Associate Professor, Music

Raymond W. Beisel, PhD, The Pennsylvania State University
Professor, Disability Access and Advising

John E. Benhart, PhD, University of Tennessee, Knoxville
Professor, Chairperson, Geography and Regional Planning

Maryanne Benjamin, PhD, Iowa State University
Assistant Professor, Student Affairs in Higher Education

Gail I. Berlin, PhD, University of Pennsylvania
Professor, English

Pearl S. Berman, PhD, Bowling Green State University
Professor, Chairperson, Psychology

Parimal S. Bhagat, PhD, The Pennsylvania State University
Professor, Marketing

Prashanth N. Bharadwaj, PhD, Rutgers, The State University of New Jersey—New Brunswick
Professor, Management; Dean's Associate, Eberly College of Business and Information Technology

Seema Bharathan, PhD, University of Maine
Associate Professor, Biology

Shundong Bi, PhD, Howard University
Professor, Biology

Carrie E. Bishop, MLS, Clarion University of Pennsylvania
Assistant Professor, University Libraries

Resa C. Bizzaro, PhD, University of North Carolina at Greensboro
Associate Professor, English

Christine Black, PhD, The Pennsylvania State University
Professor, Kinesiology, Health, and Sport Science

Laurel J. Black, PhD, Miami University
Associate Professor, English

Lynanne Black, PhD, Temple University
Professor, Educational and School Psychology; Dean's Associate for Academic Affairs, College of Education and Communications

Elaine A. Blair, PhD, University of Pittsburgh
Professor, Chairperson, Kinesiology, Health, and Sport Science

Janet A. Blood, PhD, Oregon State University
Associate Professor, Human Development, Fashion, and Interior Design

Holly R. Boda-Sutton, MFA, Texas Woman's University
Professor, Theater and Dance

Wayne K. Bodle, PhD, University of Pennsylvania
Assistant Professor, History

Robert J. Boldin, PhD, University of Pennsylvania
Professor, Finance and Legal Studies

Kathryn Bonach, PhD, University of Pittsburgh
Professor, Sociology; Dean's Associate for Administration, School of Graduate Studies and Research

Johanna U. Boothby, MS, Indiana University of Pennsylvania
Instructor, Nursing and Allied Health Professions

Susan R. Boser, PhD, Cornell University
Professor, Chairperson, Sociology

Lynn A. Botelho, PhD, University of Cambridge
Distinguished University Professor and Professor, History; Director, Women's and Gender Studies Program

Rachelle R. Bouchat, PhD, University of Kentucky
Assistant Professor, Mathematics

John L. Bradshaw, PhD, University of Pittsburgh
Assistant Professor, Physics

Jill L. Brady, PhD, University of Pittsburgh
Associate Professor, Communication Disorders, Special Education, and Disability Services

John E. Branscum, PhD, University of Cincinnati
Associate Professor, English

Holly Branthoover, EdD, Duquesne University
Professor, Counseling

William M. Brenneman, PhD, University of Southern Mississippi
Assistant Professor, Biology

- Roger L. Briscoe**, PhD, University of Michigan—Ann Arbor
Associate Professor, Educational and School Psychology
- Karen L. Brown**, MLS, North Carolina Central University
Associate Professor, University Libraries
- Sarah L. Brown**, PhD, Arizona State University
Associate Professor, Human Development, Fashion, and Interior Design
- Michelle L. Bruno**, PhD, The Ohio State University
Professor, Counseling
- F. Robert Buchanan**, PhD, University of Texas at Arlington
Associate Professor, Management
- Donald W. Buckwalter**, PhD, University of Tennessee, Knoxville
Professor, Geography and Regional Planning
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Associate Professor, Mathematics
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Associate Professor, Mathematics; Dean's Associate, College of Natural Sciences and Mathematics
- Framarz Byramjee**, PhD, Florida Atlantic University of Boca
Professor, Chairperson, Marketing
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Assistant Professor, Nursing and Allied Health Professions
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Assistant Professor, Mathematics
- Stacia A. Carone**, EdD, University of Virginia
Assistant Professor, Counseling
- Brian D. Carpenter**, PhD, University of Pittsburgh
Assistant Professor, English
- Joshua L. Castle**, PhD, University of New Mexico
Associate Professor, Kinesiology, Health, and Sport Science
- Stephanie B. Caulder**, DMA, Florida State University
Professor, Chairperson, Music
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Associate Professor, Chairperson, Safety Sciences
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Professor, Geoscience
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Assistant Professor, Anthropology
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Associate Professor, Chairperson, Political Science
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Professor, Religious Studies; Dean's Associate, College of Humanities and Social Sciences
- Pankaj Chaudhary**, PhD, Southern Illinois University Carbondale
Professor, Chairperson, Information Systems and Decision Sciences
- Mukesh K. Chaudhry**, DBA, Cleveland State University
Professor, Finance and Legal Studies
- John C. Chrispell**, PhD, Clemson University
Associate Professor, Mathematics
- Kristy S. Chunta**, PhD, West Virginia University
Associate Professor, Nursing and Allied Health Professions
- Nicole Ann Clark**, DCN, University of Medicine and Dentistry of New Jersey
Assistant Professor, Food and Nutrition
- Deborah M. Clawson**, DEd, Indiana University of Pennsylvania
Assistant Professor, Employment and Labor Relations
- Nixon S. Cleophat**, PhD, United Theological Seminary of the City of New York
Assistant Professor, Religious Studies
- Christine M. Clewell**, DMA, University of Michigan
Assistant Professor, Music
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Associate Professor, University Libraries
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Assistant Professor, Theater and Dance
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Professor, Mathematics
- Kenneth S. Coles**, PhD, Columbia University
Associate Professor, Geoscience
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Associate Professor, Music
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Associate Professor, English
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Assistant Professor, History
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Assistant Professor, University Libraries
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Assistant Professor, Criminology and Criminal Justice
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Associate Professor, Professional Studies in Education
- Mark E. Correia**, PhD, Washington State University
Professor, Criminology and Criminal Justice
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Associate Professor, Art
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Professor, Counseling
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Professor, Music
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Associate Professor, Biology
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Assistant Professor, Art
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Professor, Communication Disorders, Special Education, and Disability Services
- David E. Doverspike**, JD, EdD, University of Akron
Assistant Professor, Professional Studies in Education
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Assistant Professor, Religious Studies
- David B. Downing**, PhD, State University of New York at Buffalo
Distinguished University Professor and Professor, English
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Associate Professor, English
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Associate Professor, Chairperson, University Libraries
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Associate Professor, English

- Joseph E. Duchamp**, PhD, Purdue University
Associate Professor, Biology
- Catherine M. Dugan**, DEd, Indiana University of Pennsylvania
Associate Professor, Director, Disability Access and Advising
- Brandon C. Dulisse**, PhD, University of Cincinnati
Assistant Professor, Criminology and Criminal Justice
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Assistant Professor, Sociology
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Instructor, Nursing and Allied Health Professions
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Assistant Professor, Nursing and Allied Health Professions
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Associate Professor, Music
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Associate Professor, Political Science
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Assistant Professor, Kinesiology, Health, and Sport Science
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Professor, Nursing and Allied Health Professions
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Assistant Professor, Geography and Regional Planning
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Assistant Professor, Foreign Languages
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Professor, Criminology and Criminal Justice; Dean's Associate, School of Graduate Studies and Research
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Associate Professor, Nursing and Allied Health Professions
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Assistant Professor, Theater and Dance
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Associate Professor, Chairperson, Nursing and Allied Health Professions
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Associate Professor, Information Systems and Decision Sciences
- Valerie J. Gunter**, PhD, Michigan State University
Associate Professor, Sociology
- Lorraine J. Guth**, PhD, Indiana University—Bloomington
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- Ajaward I. Haija**, PhD, The Pennsylvania State University
Professor, Physics
- Sajad A. Hamidi**, PhD, Tarbiat Modares University, Tehran, Iran
Assistant Professor, Physics
- David I. Hanauer**, PhD, Bar Ilan University
Professor, English
- Kathleen J. Hanrahan**, PhD, Rutgers, The State University of New Jersey—New Brunswick
Professor, Criminology and Criminal Justice
- Beth Ann Harrington**, MFA, University of Wisconsin—Madison
Assistant Professor, Art
- Derek R. Hatfield**, PhD, Ohio University
Associate Professor, Psychology
- D. Alex Heckert**, PhD, University of Iowa
Professor, Chairperson, Sociology
- Tanya M. Heflin**, PhD, University of Southern California
Assistant Professor, English
- Kelly L. Heider**, DEd, Indiana University of Pennsylvania
Professor, University Libraries
- Jenna M. Hennessey**, PhD, Duquesne University
Assistant Professor, Educational and School Psychology
- Nathan A. Heuer**, MFA, Kendall College of Art and Design
Assistant Professor, Chairperson, Art
- Timothy G. Hibsman**, DEd, Pepperdine University
Associate Professor, English
- Melanie D. Hildebrandt**, PhD, Columbia University
Associate Professor, Sociology
- Annah L. Hill**, DEd, Indiana University of Pennsylvania
Assistant Professor, Communication Disorders, Special Education, and Disability Services
- Robert D. Hinrichsen**, PhD, Indiana University—Bloomington
Professor, Biology

Richard J. Hoch, PhD, West Virginia University
Associate Professor, Geography and Regional Planning

Patricia Hockensmith, MS, Indiana University of Pennsylvania
Instructor, Nursing and Allied Health Professions

Riah L. Hoffman, PhD, Indiana University of Pennsylvania
Assistant Professor, Nursing and Allied Health Professions

Melanie D. Holm, PhD, Rutgers, The State University of New Jersey—
New Brunswick
Assistant Professor, English

Laura K. Homsey-Messer, PhD, University of Pittsburgh
Associate Professor, Anthropology

Ronald G. Horner, DMA, West Virginia University
Assistant Professor, Music

Steven A. Hovan, PhD, University of Michigan—Ann Arbor
Distinguished University Professor and Professor, Chairperson,
Geoscience

Pao Ying L. Hsiao, PhD, The Pennsylvania State University
Assistant Professor, Food and Nutrition

Richard Hsiao, PhD, Florida State University
Professor, Kinesiology, Health, and Sport Science

Christine M. Huhn, PhD, Purdue University
Assistant Professor, Foreign Languages

Eun J. Hwang, PhD, Virginia Polytechnic Institute and State University
Associate Professor, Human Development, Fashion, and Interior
Design

Mildred K. Hyde, PhD, Southern Illinois University Carbondale
Professor, Information Systems and Decision Sciences

Vida R. Irani, PhD, University of Dayton
Associate Professor, Biology

Glen A. Ishoy, PhD, Georgia State University
Assistant Professor, Criminology and Criminal Justice

Rachel D. Jackson, MFA, University of Pittsburgh
Assistant Professor, Theater and Dance

Steven F. Jackson, PhD, University of Michigan—Ann Arbor
Professor, Political Science

Avijita Jain, PhD, Virginia Polytechnic Institute and State University
Assistant Professor, Chemistry

David J. Janetski, PhD, University of Notre Dame
Assistant Professor, Biology

Christopher A. Janicak, PhD, Loyola University Chicago
Professor, Safety Sciences

Sandra L. Janicki, MA, University of Pittsburgh
Associate Professor, University Libraries

Christopher R. Jeffords, PhD, University of Connecticut
Assistant Professor, Economics

Melvin A. Jenkins, DEd, Grambling State University
Professor, Chairperson, Developmental Studies

Linda G. Jennings, DMA, University of Texas at Austin
Associate Professor, Music

Randy L. Jesick, MSJ, West Virginia University
Assistant Professor, Journalism and Public Relations

Rita M. Johnson, PhD, The Pennsylvania State University
Associate Professor, Chairperson, Food and Nutrition

Shirley A. Johnson, DEd, University of Pittsburgh
Assistant Professor, Professional Studies in Education

Tara L. Johnson, PhD, West Virginia University
Associate Professor, Psychology

Brian R. Jones, MFA, University of Florida
Professor, Chairperson, Theater and Dance

James J. Jozefowicz, PhD, State University of New York at Albany
Professor, Economics

Stephanie M. Jozefowicz, PhD, Indiana University—Bloomington
Professor, Economics

Irene Kabala, PhD, The Johns Hopkins University
Associate Professor, Art

Krzysztof Z. Kaniasty, PhD, University of Louisville
Distinguished University Professor and Professor, Psychology

Alexandria L. Kappel, DEd, West Virginia University
Assistant Professor, Communication Disorders, Special Education, and
Disability Services

John A. Kapusta, MA, Indiana University of Pennsylvania
Assistant Professor, Culinary Arts

Majid Karimi, PhD, University of Oklahoma Norman Campus
Professor, Physics

Irvin C. Kauffman
Associate Professor, Music

Richard J. Kemp, PhD, University of Pittsburgh
Professor, Theater and Dance

Gregory G. Kenning, PhD, Michigan State University
Professor, Physics

Jo Anne Kerr, PhD, Indiana University of Pennsylvania
Professor, English

Jason S. Killam, PhD, Indiana University—Bloomington
Associate Professor, Foreign Languages

Bit Na Kim, PhD, Sam Houston State University
Associate Professor, Criminology and Criminal Justice

Yongtaek Kim, PhD, University of Oregon
Associate Professor, Foreign Languages

Michael G. Kingan, DMA, University of North Texas
Professor, Music

Steven B. Kleinman, MA, Syracuse University
Assistant Professor, Communications Media

Germain P. Kline, PhD, Walden University
Associate Professor, Accounting

Becky A. Knickelbein, DEd, University of Pittsburgh
Associate Professor, Communication Disorders, Special Education, and
Disability Services

Laura A. Knight, PhD, Oklahoma State University
Assistant Professor, Psychology

Megan E. Knoch, PhD, Kent State University
Associate Professor, Biology

Jaeju Ko, PhD, Northeastern University
Associate Professor, Chemistry

Anne E. Kondo, PhD, University of Western Ontario, Canada
Associate Professor, Chairperson, Chemistry

Michael T. Korn, PhD, Indiana University of Pennsylvania
Associate Professor, Employment and Labor Relations

Paul M. Kosicek, PhD, Indiana University of Pennsylvania
Associate Professor, Management

Robert M. Kostelnik, PhD, University of Pittsburgh
Associate Professor, Kinesiology, Health, and Sport Science

Krish S. Krishnan, PhD, University of Pittsburgh
Professor, Marketing

Christopher M. Kuipers, PhD, University of California—Irvine
Associate Professor, English

Keri S. Kulik, PhD, University of Pittsburgh
Associate Professor, Kinesiology, Health, and Sport Science

Yu-Ju Kuo, PhD, Arizona State University
Associate Professor, Mathematics

Keith S. Kyler, PhD, University of Wyoming
Assistant Professor, Chemistry

Amy L. Labant, PhD, University of Pittsburgh
Assistant Professor, Nursing and Allied Health Professions

Charles H. Lake, PhD, State University of New York at Buffalo
Professor, Chemistry

Charles L. Lamb, PhD, University of Kansas
Assistant Professor, Mathematics

Nadene A. L'Amoreaux, PhD, Kent State University
Professor, Counseling

David J. LaPorte, PhD, Temple University
Professor, Psychology

Idamarie Laquatra, PhD, The Pennsylvania State University
Assistant Professor, Food and Nutrition

Jeffery L. Larkin, PhD, University of Kentucky
Professor, Biology

- John J. Lattanzio**, PhD, University of Pittsburgh
Professor, Mathematics
- Erick J. Lauber**, PhD, University of Michigan—Ann Arbor
Associate Professor, Journalism and Public Relations
- DeAnna M. Laverick**, DEd, Indiana University of Pennsylvania
Professor, Professional Studies in Education
- Daniel T. Lawson**, PhD, Florida State University
Associate Professor, Management
- Kristen L. Lawson**, DEd, Valdosta State University
Assistant Professor, Developmental Studies
- Carl R. LeBlond**, PhD, Seton Hall University
Professor, Chemistry
- Daniel R. Lee**, PhD, University of Maryland College Park
Professor, Criminology and Criminal Justice
- Mary Beth Leidman**, EdD, Vanderbilt University
Professor, Communications Media
- James S. Lenze**, PhD, The Pennsylvania State University
Professor, Communications Media
- John C. Levey**, PhD, University of Michigan—Ann Arbor
Assistant Professor, Music
- John A. Lewis**, PhD, Indiana University of Pennsylvania
Associate Professor, Criminology and Criminal Justice
- Jonathan C. Lewis**, PhD, University of Connecticut
Professor, Geoscience
- John Lipinski**, PhD, University of Pittsburgh
Associate Professor, Management
- Werner D. Lippert**, PhD, Vanderbilt University
Associate Professor, History
- Elaine B. Little**, MS, Indiana University of Pennsylvania
Instructor, Nursing and Allied Health Professions
- Shijuan Liu**, PhD, Indiana University—Bloomington
Associate Professor, Foreign Languages
- See-Yin Lo**, DMA, Eastman School of Music, University of Rochester
Assistant Professor, Music
- Mary Logan-Hastings**, DMA, University of Maryland Baltimore
Professor, Music
- Lori E. Lombard**, PhD, The Pennsylvania State University
Professor, Communication Disorders, Special Education, and Disability Services
- Anson E. Long**, PhD, The Pennsylvania State University
Associate Professor, Psychology
- George R. Long**, PhD, Utah State University
Professor, Chemistry
- Valerie N. Long**, PhD, University of Ohio
Assistant Professor, Mathematics
- David O. Loomis**, PhD, University of North Carolina at Chapel Hill
Associate Professor, Journalism and Public Relations
- David G. Lorenzi**, DEd, West Virginia University
Associate Professor, Kinesiology, Health, and Sport Science
- John Wesley Lowery**, PhD, Bowling Green State University
Professor, Chairperson, Student Affairs in Higher Education
- Soo Chun Lu**, PhD, Ohio University
Associate Professor, History
- Heidi Lucas**, DMA, University of Georgia
Assistant Professor, Music
- Carl S. Luciano**, PhD, West Virginia University
Professor, Biology
- Dasen Luo**, PhD, Case Western Reserve University
Professor, Psychology
- J. Beth Mabry**, PhD, Virginia Polytechnic Institute and State University
Associate Professor, Sociology
- Crystal Machado**, EdD, Arkansas State University
Associate Professor, Professional Studies in Education
- Mary C. MacLeod**, PhD, University of North Carolina at Chapel Hill
Associate Professor, Chairperson, Philosophy
- Suneel Maheshwari**, PhD, Florida Atlantic University
Professor, Accounting
- Sanda A. Maicananu**, PhD, Cranfield University, England
Assistant Professor, Chemistry
- Christoph E. Maier**, PhD, Oklahoma State University
Associate Professor, Mathematics
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Associate Professor, Biology
- Sudipta Majumdar**, PhD, Wesleyan University
Assistant Professor, Chemistry
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Associate Professor, History
- Elizabeth R. Marcus**, PhD, Emory University
Assistant Professor, History
- Luz Stella Marin**, ScD, University of Massachusetts
Assistant Professor, Safety Sciences
- John L. Marsden**, PhD, Ohio University
Assistant Professor, English
- Laura E. Marshak**, PhD, University of Pittsburgh
Professor, Counseling
- Jamie S. Martin**, PhD, Indiana University of Pennsylvania
Professor, Criminology and Criminal Justice
- David G. Martynuik**, PhD, Florida State University
Associate Professor, Music
- Calvin O. Masilela**, PhD, Virginia Polytechnic Institute and State University
Professor, Geography and Regional Planning
- Sharon M. Massey**, MFA, East Carolina University
Assistant Professor, Art
- Jeanine M. Mazak Kahne**, PhD, Michigan State University
Associate Professor, History
- John T. McCarthy**, PhD, University of Missouri—Kansas City
Professor, Counseling
- Sally M. McCombie**, PhD, University of Pittsburgh
Associate Professor, Human Development, Fashion, and Interior Design; Dean's Associate, College of Health and Human Services
- Charles R. McCreary**, PhD, Northwestern University
Associate Professor, Foreign Languages
- Sean M. McDaniel**, PhD, University of Pennsylvania
Professor, Foreign Languages
- Theresa R. McDevitt**, PhD, Kent State University
Professor, University Libraries
- Nathan R. McElroy**, PhD, The Pennsylvania State University
Associate Professor, Chemistry
- Jacqueline M. McGinty**, PhD, Colorado State University
Assistant Professor, Adult and Community Education
- Mark R. McGowan**, PhD, Northern Arizona University
Associate Professor, Educational and School Psychology
- Maureen C. McHugh**, PhD, University of Pittsburgh
Distinguished University Professor and Professor, Psychology
- Kevin F. McKee**, EdD, University of Tennessee, Knoxville
Associate Professor, Kinesiology, Health, and Sport Science
- Courtney L. McLaughlin**, PhD, Kent State University
Associate Professor, Educational and School Psychology
- William M. Meil**, PhD, Washington State University
Professor, Psychology
- Yuliya Melnikova**, PhD, Texas State University
Assistant Professor, Mathematics
- Scott E. Mensch**, PhD, Capella University
Professor, Information Systems and Decision Sciences
- Alida V. Merlo**, PhD, Fordham University
Professor, Criminology and Criminal Justice
- Joann M. Migyanka**, DEd, Indiana University of Pennsylvania
Associate Professor, Communication Disorders, Special Education, and Disability Services
- Jessica E. Miller**, PsyD, Indiana University of Pennsylvania
Assistant Professor, Chairperson, Counseling Center
- Katrina L. Miller**, PhD, University of Nevada-Reno
Assistant Professor, English
- Laurie S. Miller**, PhD, Indiana University of Pennsylvania
Assistant Professor, Journalism and Public Relations

John A. Mills, PhD, State University of New York at Buffalo
Professor, Psychology

Wanda D. Minnick, PhD, Indiana University of Pennsylvania
Associate Professor, Safety Sciences

Brenda M. Mitchell, PhD, University of Illinois at Urbana—Champaign
Associate Professor, Art

Hilario Molina, PhD, Texas A & M University
Assistant Professor, Sociology

R. Scott Moore, PhD, The Ohio State University
Professor, Chairperson, History

Kelli Jo Kerry Moran, PhD, Iowa State University
Associate Professor, Professional Studies in Education

Eric Morschhauser, PhD, University of Pennsylvania
Associate Professor, Biology

Gregory J. Mount, PhD, Florida Atlantic University—Boca Raton
Assistant Professor, Geoscience

Nurhaya Muchtar, PhD, University of Tennessee, Knoxville
Associate Professor, Communications Media

John A. Mueller, EdD, Teachers College, Columbia University
Professor, Student Affairs in Higher Education

Stanford G. Mukasa, PhD, McGill University, Canada
Associate Professor, Journalism and Public Relations

Sadie J. Mummert, PhD, Georgia State University
Assistant Professor, Criminology and Criminal Justice

Robert J. Mutchnick, PhD, Florida State University
Professor, Chairperson, Criminology and Criminal Justice

David M. Myers, PhD, The Pennsylvania State University
Associate Professor, Counseling Center

Ataollah Nahouraii, PhD, University of Pittsburgh
Professor, Information Systems and Decision Sciences

Sung Namkung, PhD, Temple University
Associate Professor, Management

Bharathan Narayanaswamy, PhD, University of Maine at Orono
Professor, Chairperson, Biology

Channa Navaratna, PhD, Texas Tech University
Professor, Mathematics

Paul M. Nealen, PhD, University of Pennsylvania
Associate Professor, Biology

Eric R. Nelson, MS, Indiana University of Pennsylvania
Instructor, Safety Sciences

Phillip D. Neusius, PhD, University of Missouri—Columbia
Professor, Anthropology

Sarah W. Neusius, PhD, Northwestern University
Professor, Anthropology

Lisa C. Newell, PhD, University of Pittsburgh
Associate Professor, Psychology

Laurie N. Nicholson, DEd, Indiana University of Pennsylvania
Professor, Professional Studies in Education

Jean Nienkamp, PhD, The Pennsylvania State University
Associate Professor, English

Linda C. Norris, PhD, University of Pittsburgh
Professor, English

Muhammad Z. Numan, PhD, College of William and Mary
Professor, Chairperson, Physics

Andrew P. Nutter, MA, Indiana University of Pennsylvania
Assistant Professor, Culinary Arts

Pamela S. O’Harra, DEd, Indiana University of Pennsylvania
Instructor, Nursing and Allied Health Professions

Brian W. Okey, PhD, University of Guelph, Canada
Associate Professor, Geography and Regional Planning

Therese D. O’Neil, MEd, Indiana University of Pennsylvania
Assistant Professor, Computer Science

Gerald Opalinski, MBA, Indiana University of Pennsylvania
Assistant Professor, Accounting

Christopher R. Orchard, PhD, University of Oxford
Professor, English

John N. Orife, PhD, Michigan State University
Associate Professor, Management

Anna V. Ortiz, PhD, Purdue University
Assistant Professor, Communications Media

Stephen W. Osborne, PhD, University of Pittsburgh
Professor, Management

Lora K. Ott, PhD, University of Pittsburgh
Associate Professor, Nursing and Allied Health Professions

Gian S. Pagnucci, PhD, University of Wisconsin—Madison
Distinguished University Professor and Professor, Chairperson, English

Elizabeth A. Palmer, PhD, Duquesne University
Professor, Nursing and Allied Health Professions

Kalani M. Palmer, PhD, University of Pittsburgh
Assistant Professor, Human Development, Fashion, and Interior Design

Susan M. Palmisano, MFA, University of Cincinnati
Professor, Art

Mark V. Palumbo, PhD, Wright State University
Assistant Professor, Psychology

Jin Pang, MLS, University of Pittsburgh
Assistant Professor, University Libraries

Michele R. Papakie, DSC, Robert Morris University
Associate Professor, Chairperson, Journalism and Public Relations

Kelli R. Paquette, EdD, Wilmington College
Professor, Chairperson, Professional Studies in Education

Mavis Pararai, PhD, Central Michigan University
Associate Professor, Mathematics

Gloria G. Park, PhD, University of Maryland College Park
Associate Professor, English

Sara M. Parme, MLS, University of Pittsburgh
Assistant Professor, University Libraries

Helmut W. Paschold, PhD, University of Texas at El Paso
Assistant Professor, Safety Sciences

Madeline Paternostro-Bayles, PhD, University of Pittsburgh
Professor, Kinesiology, Health, and Sport Science

Kevin J. Patrick, PhD, University of North Carolina at Chapel Hill
Professor, Geography and Regional Planning

Timothy A. Paul, DMA, University of Colorado at Boulder
Assistant Professor, Music

Raymond P. Pavloski, PhD, McMaster University Hamilton, Canada
Professor, Psychology

Veronica Paz, DBA, Nova Southeastern University
Associate Professor, Accounting

C. Hans Pedersen, PhD, University of South Florida
Associate Professor, Philosophy

Anthony D. Perillo, PhD, State University of New York
Assistant Professor, Psychology

Jennifer Perillo, PhD, State University of New York
Assistant Professor, Psychology

Aleca L. Perry, PhD, University of Illinois at Chicago
Assistant Professor, Political Science

Louis J. Pesci, DEd, Indiana University of Pennsylvania
Assistant Professor, Kinesiology, Health, and Sport Science

Shannon W. Phaneuf, PhD, University of Maryland College Park
Associate Professor, Criminology and Criminal Justice

Lynn A. Pike, MA, Indiana University of Pennsylvania
Assistant Professor, Chairperson, Culinary Arts

David M. Piper, DEd, Indiana University of Pennsylvania
Professor, Chairperson, Employment and Labor Relations

Nancy Pipkin-Hutchison, MFA, University of California—Davis
Assistant Professor, Theater and Dance

Mark J. Piwinsky, PhD, The Ohio State University
Professor, Communications Media

Brittany L. Pollard, MEd, Lincoln Memorial University
Assistant Professor, Counseling

Amanda B. Poole, PhD, University of Washington
Associate Professor, Anthropology; Dean’s Associate, College of Humanities and Social Sciences

Susan G. Poorman, PhD, University of Pittsburgh
Professor, Nursing and Allied Health Professions

- Curtis J. Porter**, PhD, The Pennsylvania State University
Assistant Professor, English
- Rachel B. Porter**, MFA, The New School
Assistant Professor, Communications Media
- Todd B. Potts**, PhD, University of Georgia
Professor, Economics
- Heather H. Powers**, PhD, University of California—Irvine
Associate Professor, English
- Lisa H. Price**, PhD, University of Georgia
Professor, Communication Disorders, Special Education, and Disability Services
- Daniel J. Puhlman**, PhD, Florida State University
Assistant Professor, Human Development, Fashion, and Interior Design
- Amber N. Racchini**, DEd, Indiana University of Pennsylvania
Assistant Professor, Developmental Studies
- James J. Racchini**, DEd, Indiana University of Pennsylvania
Assistant Professor, Kinesiology, Health, and Sport Science
- Daniel P. Radelet**, PhD, University of Pittsburgh
Associate Professor, Mathematics
- Willard W. Radell**, PhD, University of Illinois at Urbana—Champaign
Professor, Economics
- Catherine Raeff**, PhD, Clark University
Professor, Psychology
- Bennett A. Rafoth**, EdD, University of Georgia
Distinguished University Professor and Professor, English
- Carl J. Rahkonen**, PhD, Indiana University—Bloomington
Professor, University Libraries
- Monsurur Rahman**, DBA, Southern Illinois University Carbondale
Professor, Accounting
- Margaret C. Reardon**, PhD, Florida International University
Associate Professor, Psychology
- Edel M. Reilly**, DEd, Indiana University of Pennsylvania
Professor, Mathematics; Director, Liberal Studies
- Laura H. Rhodes**, DEd, University of Pittsburgh
Associate Professor, Safety Sciences
- Cynthia M. Richburg**, PhD, University of Tennessee, Knoxville
Professor, Communication Disorders, Special Education, and Disability Services
- Sue A. Rieg**, EdD, Duquesne University
Professor, Professional Studies in Education; Dean's Associate for Educator Preparation, College of Education and Communications
- José E. Rivera**, MEd, Old Dominion University
Assistant Professor, Kinesiology, Health, and Sport Science
- Bradley K. Rives**, PhD, University of Maryland College Park
Associate Professor, Philosophy
- Stephen P. Roach**, MS, Slippery Rock University of Pennsylvania
Assistant Professor, Director, Intercollegiate Athletics
- Jennifer J. Roberts**, PhD, University of Nebraska—Omaha
Professor, Criminology and Criminal Justice
- Shari A. Robertson**, PhD, University of Wisconsin—Madison
Professor, Communication Disorders, Special Education, and Disability Services; Provost's Associate
- James A. Rodger**, DBA, Southern Illinois University Carbondale
Professor, Information Systems and Decision Sciences
- Lydia H. Rodríguez**, PhD, University of Cincinnati
Professor, Foreign Languages
- Laurie Roehrich**, PhD, University of South Florida
Associate Professor, Psychology
- Eric W. Rosenberger**, PhD, The Pennsylvania State University
Professor, Counseling Center
- Joseph A. Rosendale**, PhD, Indiana University of Pennsylvania
Assistant Professor, Management
- Eric M. Rubenstein**, PhD, University of North Carolina at Chapel Hill
Associate Professor, Philosophy
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Assistant Professor, Biology
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Assistant Professor, Psychology
- Timothy J. Runge**, PhD, The Pennsylvania State University
Associate Professor, Chairperson, Educational and School Psychology
- Martha J. Rupert**, MA, Indiana University of Pennsylvania
Instructor, Culinary Arts
- Marveta M. Ryan-Sams**, PhD, Harvard University
Associate Professor, Foreign Languages
- Daniel D. Sadler**, PhD, University of Illinois at Urbana—Champaign
Associate Professor, Psychology
- Namrata Saikia**
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Assistant Professor, Sociology
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Instructor, Culinary Arts
- Lilia P. Savova**, PhD, Sofia University (Bulgaria)
Professor, English
- Karen M. Scarton**, DEd, Indiana University of Pennsylvania
Assistant Professor, Chairperson, Human Development, Fashion, and Interior Design
- Christopher R. Schaney**, PhD, West Virginia University
Assistant Professor, Geography and Regional Planning
- Steven P. Schroeder**, PhD, University of Pittsburgh
Assistant Professor, History
- Michael S. Schwartz**, PhD, University of Pittsburgh
Associate Professor, Theater and Dance
- Lisa M. Sciuilli**, PhD, University of Pittsburgh
Professor, Marketing
- Daniel W. Scott**, DoC, University of California—Irvine
Assistant Professor, Criminology and Criminal Justice
- Brion A. Scudder**, JD, State University of New York at Buffalo
Associate Professor, Finance and Legal Services
- Gail S. Sechrist**, PhD, Louisiana State University and A&M College
Associate Professor, Geography and Regional Planning
- Robert P. Sechrist**, PhD, Louisiana State University and A&M College
Professor, Geography and Regional Planning
- Ronald F. See**, PhD, State University of New York at Buffalo
Professor, Chemistry
- Michael T. Sell**, PhD, University of Michigan—Ann Arbor
Professor, English
- Jodie M. Seybold**, MS, Indiana University of Pennsylvania
Instructor, Food and Nutrition
- Joyce A. Shanty**, PhD, West Virginia University
Associate Professor, Nursing and Allied Health Professions;
Coordinator, Allied Health Professions Programs;
Coordinator, Gerontology Certificate Program
- Varinder M. Sharma**, PhD, University of North Texas
Professor, Marketing
- Brian D. Sharp**, PhD, University of Virginia
Associate Professor, Mathematics
- Teresa C. Shellenbarger**, PhD, Widener University
Distinguished University Professor and Professor, Nursing and Allied Health Professions
- Lynn B. Shelly**, PhD, University of Pittsburgh
Associate Professor, English
- Cora Lou Sherburne**, PhD, University of Kentucky
Assistant Professor, Psychology
- Kenneth W. Sherwood**, PhD, State University of New York at Buffalo
Associate Professor, English
- Mariha K. Shields**, DEd, Indiana University of Pennsylvania
Assistant Professor, Communication Disorders, Special Education, and Disability Services
- Diane S. Shinberg**, PhD, University of Wisconsin—Madison
Associate Professor, Sociology
- Stephen B. Shiring**, DEd, University of Pittsburgh
Professor, Chairperson, Hospitality Management
- Susan M. Sibert**, EdD, Indiana University of Pennsylvania
Assistant Professor, Professional Studies in Education

Bryna L. Siegel Finer, PhD, University of Rhode Island
Assistant Professor, English

Thomas W. Simmons, PhD, Saint John's University
Professor, Biology

Yaya Sissoko, PhD, Southern Illinois University Carbondale
Associate Professor, Economics

Frederick J. Slack, PhD, University of Pittsburgh
Associate Professor, Management

Thomas J. Slater, PhD, Oklahoma State University
Professor, English

Mark A. Sloniger, PhD, University of Georgia
Associate Professor, Kinesiology, Health, and Sport Science

David T. Smith, PhD, Nova Southeastern University
Professor, Chairperson, Computer Science

Jennifer Smith, PhD, West Virginia University
Assistant Professor, Geography and Regional Planning

Jonathan B. Smith, EdD, Temple University
Professor, Kinesiology, Health, and Sport Science

Theresa S. Smith, PhD, Boston University
Professor, Chairperson, Religious Studies

Dawn Marie Smith-Sherwood, PhD, State University of New York at Buffalo
Associate Professor, Foreign Languages

Stanley J. Sobolewski, PhD, State University of New York at Buffalo
Associate Professor, Physics

Ramesh G. Soni, PhD, University of Texas at Arlington
Professor, Chairperson, Management

Jonathan N. Southard, PhD, Utah State University
Associate Professor, Chemistry

Jay Start, PhD, University of Pittsburgh
Associate Professor, Communications Media

Jaelyn E. Steele, MS, Robert Morris University
Instructor, Culinary Arts

Rachel Sternfeld, PhD, University of Texas at Austin
Assistant Professor, Political Science

Mary K. Stewart, PhD, University of California—Davis
Assistant Professor, English

Zachary J. Stiegler, PhD, The University of Iowa
Associate Professor, Communications Media

Rosalee M. Stilwell, PhD, Bowling Green State University
Associate Professor, English

Russell S. Stocker IV, PhD, University of South Carolina—Columbia
Associate Professor, Mathematics

Kristi L. Storti, PhD, University of Pittsburgh
Assistant Professor, Kinesiology, Health, and Sport Science

Gary S. Stoudt, PhD, Lehigh University
Professor, Mathematics

Linda P. Sullivan, MBA, California University of Pennsylvania
Assistant Professor, Hospitality Management

Melissa L. Swauger, PhD, Duquesne University
Associate Professor, Sociology

Marissa M. Sweeny, PhD, The Pennsylvania State University
Assistant Professor, Art

Robert W. Sweeny, PhD, The Pennsylvania State University
Professor, Art

Devki N. Talwar, PhD, Allahabad University, India
Distinguished University Professor and Professor, Physics

Hao Tang, PhD, The Pennsylvania State University
Assistant Professor, Chemistry

Stephanie A. Taylor-Davis, PhD, The Pennsylvania State University
Professor, Food and Nutrition; Director, Center for Teaching Excellence

Alexi S. Thompson, PhD, Kansas State University
Assistant Professor, Economics

Todd N. Thompson, PhD, University of Illinois at Chicago
Associate Professor, English

Geoffrey A. Tickell, PhD, Monash University, Australia
Professor, Accounting

Gwendolyn B. Torges, PhD, University of Arizona
Associate Professor, Political Science

Josiah H. Townsend, PhD, University of Florida
Assistant Professor, Biology

Samantha L. Traver, MBA, Indiana University of Pennsylvania
Instructor, Intercollegiate Athletics

Holly Jill Travis, DEd, Indiana University of Pennsylvania
Associate Professor, Biology

Frank A. Trenney, MS, Indiana University—Bloomington
Instructor, Intercollegiate Athletics

Ronald L. Trenney, MEd, The Pennsylvania State University
Assistant Professor, Kinesiology, Health, and Sport Science

Martha A. Troxell, JD, LLM (Taxation), Temple University
Professor, Finance and Legal Studies

Kevin L. Turner, MFA, Southern Illinois University Carbondale
Associate Professor, Art

Mark G. Twiest, PhD, University of Georgia
Professor, Professional Studies in Education

Meghan M. Twiest, EdD, University of Georgia
Professor, Professional Studies in Education

Michael C. Tyree, PhD, Virginia Polytechnic Institute and State University
Assistant Professor, Biology

Christian A. Vaccaro, PhD, Florida State University
Associate Professor, Sociology

Joan E. VanDyke, MFA, Arizona State University
Associate Professor, Theater and Dance

Todd A. VanWieren, PhD, Virginia Commonwealth University
Associate Professor, Disability Access and Advising

Susan H. Venetta, PhD, Indiana University of Pennsylvania
Assistant Professor, Human Development, Fashion, and Interior Design

Matthew Vetter, PhD, Ohio University
Assistant Professor, English

Brandon C. Vick, PhD, Fordham University
Assistant Professor, Economics

Judith H. Villa, PhD, University of New Mexico
Associate Professor, English

Jana Lynn Villemain, PhD, Texas A & M University
Associate Professor, Chemistry

David A. Wachob, PhD, Indiana University of Pennsylvania
Assistant Professor, Kinesiology, Health, and Sport Science

Jan Keith Wachter, DSC, University of Pittsburgh
Professor, Safety Sciences

Therese M. Wacker, DMA, The Ohio State University
Professor, Music

Janet M. Walker, PhD, Oregon State University
Professor, Mathematics

Jeremy Waltman, MFA, Florida State University
Assistant Professor, Communications Media

Danhua Wang, PhD, Oakland University
Associate Professor, Developmental Studies

Jianfeng Wang, PhD, University of Mississippi
Associate Professor, Information Systems and Decision Sciences

Yasong (Alex) Wang, PhD, The Pennsylvania State University
Associate Professor, Hospitality Management

Jonathan Warnock, PhD, Illinois State University
Assistant Professor, Geoscience

Veronica T. Watson, PhD, Rice University
Professor, English

Henry Webb, JD, Lewis and Clark College
Associate Professor, Finance and Legal Studies

Kim Weiner, PhD, University of Pittsburgh
Associate Professor, Counseling Center

Daniel J. Weinstein, PhD, State University of New York at Buffalo
Assistant Professor, English

Emily J. Wender, PhD, University of Pittsburgh
Assistant Professor, English

Edith A. West, PhD, Prifysgol Bangor University, England
Associate Professor, Nursing and Allied Health Professions

Sibyl C. West, PhD, The Ohio State University
Associate Professor, Counseling

Sarah M. Wheeler, PhD, University of Pittsburgh
Associate Professor, Political Science

Tamara L. Whited, PhD, University of California—Berkeley
Professor, History

Kustim Wibowo, PhD, University of Kentucky
Professor, Information Systems and Decision Sciences

C. Harrison Wick, MLS, Indiana University—Bloomington
Associate Professor, University Libraries

Daniel V. Widzowski, PhD, University of Rochester
Assistant Professor, Biology

LeAnn Wilkie, EdD, Texas Tech University
Professor, Management

Mary E. Williams, PhD, Case Western Reserve University
Professor, Nursing and Allied Health Professions; Interim Dean,
College of Health and Human Services

Michael T. Williamson, PhD, Rutgers, The State University of New
Jersey—New Brunswick Campus
Associate Professor, English

Lucinda L. Willis, PhD, Virginia Polytechnic Institute and State University
Professor, Adult and Community Education

B. Gail Wilson, DEd, University of Pittsburgh
Professor, Chairperson, Communications Media

Gregory A. Wisloski, PhD, University of Pittsburgh
Professor, Mathematics

Joette M. Wisnieski, PhD, University of Georgia
Professor, Management

Daniel R. Wissinger, PhD, University of Maryland College Park
Assistant Professor, Communication Disorders, Special Education, and
Disability Services

Dana Hysock Witham, PhD, University of Delaware
Associate Professor, Sociology

Heide Witthöft, PhD, University of Oregon
Associate Professor, Foreign Languages

Ronald J. Woan, PhD, Florida State University
Associate Professor, Accounting

Henry Wong Doe, DMA, The Juilliard School
Associate Professor, Music

Jason W. Worzbyt, DMA, University of North Texas
Professor, Music

Kaylee S. Wynkoop, PhD, University of Pittsburgh
Assistant Professor, Communication Disorders, Special Education, and
Disability Services

Wang Xi, PhD, Teachers College, Columbia University
Professor, History

Lingyan Yang, PhD, University of Massachusetts
Associate Professor, English

David B. Yerger, PhD, The Pennsylvania State University
Professor, Chairperson, Economics

Ellen Heininger Yerger, PhD, University of Illinois at
Urbana—Champaign
Assistant Professor, Biology

Marjorie J. Zambrano-Paff, PhD, University of Pittsburgh
Associate Professor, Foreign Languages

Jun-Lue (John) Zhang, PhD, Syracuse University
Professor, Mathematics

Feng (Andrew) Zhou, PhD, Shanghai Institute of Optics and Fine
Mechanics, Chinese Academy of Sciences, China
Professor, Physics

Majed M. Zreiqat, PhD, West Virginia University
Assistant Professor, Safety Sciences

Nashat M. Zuraikat, PhD, University of Pittsburgh
Professor, Nursing and Allied Health Professions

Adjunct Faculty, Clinical Laboratory Science

UPMC Altoona Regional Health System

Program Director: Deborah Pallas-Riley, MEd, MT (ACSP)

Medical Director: Mushtaq Khalid, MD

Clinical Laboratory Science Program, St. Christopher's Hospital for Children

Medical Director: Judy Mae E. Pascasio, MD, University of the
Philippines College of Medicine

Program Director: Maryann Kirschner, MT (ACSP); MBA, Eastern
University

Clinical Laboratory Science Program, York Hospital

Medical Director: Stan Hurtt, MD, University of Pittsburgh

Program Director: Edwin Beitz, CLS (NCA); MT (ACSP);
MT (HHS); MHS, University of St. Francis

Cooperative Medical Technology Program of Akron, Children's Hospital Medical Center, Akron, Ohio

Medical Director: Robert W. Novak, MD, Duke University

Program Director: Pamela Rich, MSTE, MT (ASCP), University of
Akron

School of Clinical Laboratory Science, The Reading Hospital and Medical Center

Program Director: Kimberly Leib, MS, MT (ASCP)

School of Clinical Laboratory Science, Williamsport Regional Medical Center

Medical Director: Willem Lubbe, MD, University of Cape Town,
South Africa

Program Director: Christine Wheary, MHA; MT (ASCP)

School of Medical Technology, Pennsylvania General College of Health Sciences

Medical Director/Chair: Lorenzo M. Galindo, MD

Program Director: Marie E. Wood, MT (ASCP); MS, Indiana
University of Pennsylvania

School of Medical Technology, Memorial Medical Center

Medical Director: Sidney Goldblatt, MD, Temple University

Program Director: Melissa Shaffer, MT (ASCP)

School of Medical Technology, St. Vincent Health Center

Medical Director: Jeffrey Richmond, MD

Program Director: Stephen M. Johnson, MT (ASCP); MS, The Ohio
State University

School of Medical Technology, WCA Hospital

Medical Director: William A. Geary, MD, University of Virginia
School of Medicine

Program Director: Michele Harms, MT (ASCP); MS, State University
of New York at Fredonia

Adjunct Faculty, Nuclear Medicine Technology

Nuclear Medicine Institute, The University of Findlay

Chair: Rick States, RT (N), CNMT; DHSc, Nova Southeastern
University

Program Director: Ryan J. Smith, DHSc, CNMT

Nuclear Medicine Technology, Community College of Allegheny County, Allegheny Campus

Program Director: Carl Mazzetti, ARRT (N), CNMT (NMTCB), BS,
Geneva College

Adjunct Faculty, Respiratory Care

School of Respiratory Care

Program Director: Kathryn Gills Kinderman, RRT, CPFT; MS,
University of Pittsburgh

Medical Director: Alan Lantzy, MD, University of Pittsburgh,
School of Medicine

Director of Clinical Education: Jackie M. Heisler, RRT; PhD, Capella
University

Adjunct Faculty, Athletic Training/Sports Medicine

Physicians

Center for Orthopaedics and Sports Medicine

David T. Bizousky, MD, Hahnemann University, School of Medicine

Douglas S. Fugate, MD, Hahnemann University of Health Sciences

Craig C. McKirgan, DO, University of Osteopathic Medicine and
Health Sciences

Howard P. Miller, DPM, Ohio College of Podiatric Medicine

Jagadeesha Shetty, MD, Government Medical College, Bellary, India

Allied Medical Staff

Cory E. Barton, ATC; BS, Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Blairsville-Saltsburg School District

Scott T. Bauer, ATC; BS, Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Indiana Area School District

Richard D. Beninghof, MS, Northern Michigan University

IUP Sports Medicine Clinic

Jodi Friguglinetti, ATC; MS, California University of Pennsylvania

Keystone Rehabilitation Systems/Homer-Center School District

Alan M. Keefe, PA-C, Duquesne University

Center for Orthopaedics and Sports Medicine

Christa L. Pontani, CRNP, Duquesne University

Center for Orthopaedics and Sports Medicine

Dennis Shultz, PT; MS, University of Pittsburgh

Keystone Rehabilitation Systems

Matthew Wilson, ATC; BS, Indiana University of Pennsylvania

Keystone Rehabilitation Systems/Blairsville-Saltsburg School District

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