## Catalog Home

# Undergraduate Catalog 2004/2006 

To Apply:<br>Contact the Office of Admissions<br>Toll free 1-800-929-4778<br>or visit our website at www.SRU.edu<br>Slippery Rock, Pennsylvania 16057-1326<br>1-800-SRU-9111<br>Rock Solid Education<br>Produced under the supervision of Slippery Rock University's division of Academic Affairs.<br>Slippery Rock University of Pennsylvania is a member of the Pennsylvania State System of Higher Education

## EEO Policy

Slippery Rock University is committed to providing leadership in taking affirmative action to attain equal educational and employment rights for all persons, without regard to gender, race, color, national and ethnic origin, age, disability or other legally protected classes. This policy is placed herein in accordance with state and federal laws including Title IX of the Educational Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973. Please direct affirmative action inquiries to the Office of Diversity \& Equal Opportunity, Slippery Rock University of Pennsylvania, Slippery Rock, PA 16057. Telephone: 724-738-2016.

## University Academic Life

A quality academic life for all students is the focus of Slippery Rock University. Students will find that their priority actively centers on the intellectual development necessary to successfully achieve their Bachelor's degree.

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## How Long Will It Take?

At SRU, the undergraduate program of study requires a minimum of 120 semester hours of course credit hours to receive a bachelor degree. Some students will actually complete more than 120 credit hours. This occurs for one of three reasons:

- Some students will be required to take additional courses necessary to develop basic academic competencies. These courses are not counted as credit toward graduation. (See Liberal Studies basic requirement section for more detail.)
- Some students may choose to take more than 120 credit hours. For Example: when students choose to complete more than one major, or a minor/additonal specialization.
- Some majors require more than 120 credit hours for a bachelor's degree.
- Post-baccalaureate students must complete at least 30 credit hours at SRU to earn a baccalaureate degree.


## What Degree Will I Receive?

The bachelor degree awarded depends on a number of factors particularly the major selected. Only one degree will be awarded at commencement. If a student completes more than one major, only the degree associated with the student's first major will be awarded. The undergraduate degrees and majors offered at SRU include:

## Academic Degrees and Programs

# College of Business, Information, and Social Sciences 

## School/Department

Degree/Certification/Minor

## Program

Dean's Office -College of Business Applied Science BS

Applied Science-App. BS

Tech. Mgmt.

## School of Business

| Accounting | BSBA, Minor <br> Certificate |
| :--- | :--- |
| Business Undeclared | Program |
| Business Administration, for non-business majors | Minor |
| Economics | BS, BSBA, Minor |
| Finance | BSBA, Minor <br> Personal Financial Planning |
| Health Services Management | BSBA, Minor |
| International Business | BSBA, Minor |


|  | Management | BSBA, Minor |
| :---: | :---: | :---: |
|  | Marketing | BSBA, Minor |
|  | Human Resource Management | BSBA, Minor |
| Communication | Communication | BA, Minor |
|  | Communication <br> Public Relations <br> Journalism <br> Emerging Technologies and Multimedia | BS <br> Track <br> Track <br> Track |
| Computer Science | Computer Science | BS, Minor |
|  | Information Systems | BS, Minor |
|  | Information Technology | BS, Minor |
| Political Science | Political Science <br> American Politics <br> International and Comparative Politics <br> International Affairs <br> Public Administration <br> Community Service and Service-Learning | BA, Minor <br> Minor <br> Minor <br> Minor <br> Minor <br> Minor |
| Sociology, Anthropology, | Sociology | BA, Minor |
| and Social Work | Anthropology | Track, Minor |
|  | Criminology | Track, Minor |
|  | General | Track, Minor |
|  | Social Work | BS |

## College of Education

| Counseling and | Community Counseling | MA, Endorsement |
| :---: | :---: | :---: |
| Development | Addiction Counseling | Track |
|  | Child and Adolescent Counseling | Track |
|  | Adult Counseling | Track |
|  | Principalship Prepartion | TC |
|  | Student Affairs in Higher Education | MA, Endorsement |
|  | School Counseling | MEd, TC |
| Elementary Education/ | Elementary Education | BSEd, TC |
| Early Childhood | Elementary Education-Early Development and Learning | BSED |
|  | Early Childhood | TC |
|  | Spanish | Minor |
|  | Elementary Education | MEd |
|  | Elementary Mathematics \& Science | Track |
|  | Reading | TC, Track |
|  | Elementary Education (with IUP) | EdD |
| Physical Education | Health \& Physical Education | BSEd, TC |
|  | Aquatics | Minor |
|  | Physical Education | MEd |
| Secondary Education | Secondary Education: | BSEd, TC |
|  | English |  |
|  | Social Studies -History |  |
|  | French |  |
|  | Spanish |  |

Secondary Education:
MEd, TC

Math/Science:

Biology TC

Chemistry
TC

Geology (state certification is in
Earth and Space Science)

Mathematics
TC

Physics
TC

Instructional Technology
Endorsement

Special Education Community Programs for Americans with Disabilities BS

| Exceptionalities | Minor |
| :--- | :---: |
| Special Education | BSED |

Special Education MEd

Master Teacher Track

Mentally \& Physically Handicapped
TC

Supervision
Track, TC

# College of Health, Environment and Science 

Degree/Certification/Minor

Biology

Program

BA, BS, Minor

|  | Pre-Masters of Education | Track |
| :---: | :---: | :---: |
|  | $3+3$ Logan Pre - Chiropratic | Track |
|  | $3+4$ Lake Erie Pre - Osteopathic | Track |
|  | $3+3$ Pre - Physical Therapy | Track |
|  | $2+3$ LeCom Pre - Pharmacy | Program |
|  | Cytotechnology | BS |
|  | Medical Technology | BS |
|  | Marine Science | Minor |
| Chemistry and Physics | Chemistry | BA, BS, Minor |
|  | Biochemistry | Track |
|  | Environmental | Track |
|  | Forensic | Track |
|  | Pre-Masters of Ed. | Track |
|  | Physics | BA, BS, Minor |
|  | $3+2$ Pre-Engineering | Track |
|  | Pre-Masters of Ed. | Track |
|  | Secondary Education | MEd, TC |
|  | Nanofabrication Technology | Certificate |
| Exercise and | Exercise Science | BS |
| Rehabilitative Sciences | $3+3$ Pre-Physical Therapy | Track |
|  | Athletic Training | BS |
|  | Adapted Physical Activity and Rehabilitation | Minor |
| Geography, Geology, | Geography | BA, BS, Minor |


| and the Environment | Applied Geographic Technology | Track |
| :---: | :---: | :---: |
|  | Geographic Info Technology | Minor |
|  | Environmental Studies | Track |
|  | Environmental Geosciences | BA, BS |
|  | Pre-Masters of Education | Track |
|  | Environmental Science | Track, MInor |
|  | Geology | Track, Minor |
|  | Meteorology | Minor |
| Health and Safety | Health Science | BS |
|  | Community Health | Track |
|  | $3+3$ Physical Therapy | Track |
|  | Safety \& Environmental Management | BS |
|  | Gerontology |  |
|  | Undergraduate | Minor or Certificate |
|  | Graduate | Certificate |
| Mathematics | Mathematics | BA, BS, Minor |
|  | Pre-Masters of Ed | Track |
|  | Statistics | Minor |
|  | Elementary School Math | Minor or Certificate for PB |
|  | Middle School Math | Minor or Certificate for PB |
|  | Statistical Application | Certificate |
| Nursing | Nursing | BSN |
|  | Nurse Practitioner | Track |



| English | English Literature | BA, Minor |
| :---: | :---: | :---: |
|  | English Secondary Education | BSEd, TC |
|  | English Writing | BS, Minor |
|  | Professional Writing | Track |
|  | Creative Writing | Track |
|  | English | MA |
|  | Literature and Composition | Track |
|  | Professional Writing | Track |
| History | History | BA, Minor |
|  | American History | Minor |
|  | European History | Minor |
|  | Non-Western History | Minor |
|  | History: Secondary Education | BSEd, TC |
|  | History | MA |
| Modern Languages | French | BA, BSEd, Minor, TC |
| and Cultures | International Business | BA |
|  | German | Minor |
|  | Russian | Minor |
|  | Spanish | BA, BSEd, Minor, TC |
|  | Spanish for Elementary Education | Minor |
|  | Heritage Speakers | BA |
|  | International Business | BA |
|  | International Business: Heritage Speakers | BA |


| Music | Music | BA, BM, Minor |
| :---: | :---: | :---: |
|  | Music Education | BSMusEd |
|  | Music Therapy | BS |
| Philosophy | Philosophy | BA, Minor |
|  | Career Related | Track |
|  | Liberal Arts | Track |
|  | Professional | Track |
|  | Religious Studies | Certificate of Achievement |
| Theatre | Theatre | BA, Minor |
|  | Acting | Track |
|  | Design/Technology | Track |
|  | Playwriting | Track |


| Military Science | Leadership | Minor |
| :--- | :--- | :--- |
|  | Military History | Minor |
| Academic Services | Exploratory (Undeclared) | Program |

## Choosing an Academic Program

What Makes Up an Academic Program?
Courses a student takes during their SRU experience can be broadly divided into three types: Liberal Studies, Major and Electives. Beyond this, individual students may also take courses in a minor field or for a certificate.

## Liberal Studies

Beginning Fall 2005, a new liberal studies program will take affect for all students. This new Liberal Studies Program will benefit Slippery Rock University continuing students as well as new incoming students.

The program contains six critical goals or areas of study. For each area, students select one or two classes from a selection of "goal courses." In addition, in some areas of study, students select a course from a wide class selection identified as "enrichment courses." These courses provide the opportunity to broaden and deepen knowledge in the goal area. Lastly, co-curricular "Supporting Experiences," are identified. These activities and programs available to all students and encompass working on student publications, belonging to honorary societies or working with various oncampus special interest groups. These activities show that the university experience is not and ought not be contained wholly in the classroom.

## Goal I: Basic Requirements

The educated person must be able to communicate effectively in oral and written modes. A university education should give attention to encouraging intellectual levels that will equip the individual for an energetic and productive life.

## Goal Courses ( $\mathbf{1 2}$ credits)

Some students may be exempted from one or more of the required courses based on entrance examination and/or pertinent experience. If students are exempted from a required goal course, no credit will be awarded, but the total required credits in the liberal studies program will be reduced accordingly. Some students may be required to take additional courses to develop basic academic requirements in reading and study skills and mathematics. However, credits earned in those courses are not applicable toward the credits required for a baccalaureate degree.

Goal courses in this category will be graded as A, B, C, or NC (no credit). When goal courses are repeated, they will be graded $\mathrm{A}, \mathrm{B}, \mathrm{C}$, or F .

The basic requirement courses with the exception of "interpreting literature" are subject to continuous registration. Students during the first semester of enrollment will be placed into the appropriate basic requirement course(s). Students who receive an "NC" or "F" in these courses must repeat the course(s) the following semester. Once classes begin, students are not permitted to drop a basic requirement course.

## Goal II: The Arts

Through the creative process, the artist expresses, challenges, and extends societal values. To understand our own and other cultures, one must come to terms with the artist's effort. Ideally, such understanding will lead to experiences in which the individual seeks to be a participant in the arts, finding creative ways to express feelings and insights.

## Goal Courses ( $\mathbf{3}$ credits)

It is strongly recommended that all students enrolled in arts goal courses attend a minimum of two arts events.

## Goal III: Global Community

The educated person is aware of other people, places and values. He or she has a wide perspective and values cultural diversity. The university must assist in developing insights and skills, which will enable every student to value humanity's worth, dignity and contributions.

## Goal Courses ( 9 credits)

Three credits of US courses and six credits of non US courses taken will meet the requirement.

The modern language courses used to satisfy the BA requirement may not be used in the portion of the global community perspective block.

## Goal IV: Human Institutions and Interpersonal Relationships

John Donne's declaration that "no man is an island\&" speaks eloquently to our time. To do our work and operate our society, we depend heavily upon organizations and institutions. The educated person learns to understand those institutions and to work effectively with other persons to achieve shared goals.

## Goal Courses ( $\mathbf{3}$ credits)

## Goal V: Science, Technology and Mathematics

The educated person studies science, technology and mathematics not only to master specific disciplinary content, but also to understand the modes of thought and methods of inquiry of the scientist.

Rigorous, disciplined inquiry enables us to access information and process that enhance physical well being and our natural resource use.

## Goal Courses ( $9-10$ credits)

Students are required to have one laboratory experience in either the goal or enrichment areas in the Biology, Chemistry, Physics, or Geography, Geology or the Environment departments.

## Goal VII: Challenges of the Modern Age

The essential characteristic of the educated person is the ability to weigh alternatives and make thoughtful choices. The rapidly changing world in which we live demands that we all make enormously difficult decisions, choosing wisely and responsibly in an area of competing persuasions. Courses in Goal VII will have a minimum prerequisite of "Advanced Standing."

## Enrichment Courses (9 credits)

Students mut choose coureses to choose from three of the following four areas:

1. The Arts (Select one-three credit course or three different one-credit courses)
2. Global Community
3. Human Institutions and Interpersonal Relationships
4. Science, Technology and Mathematics

For assistance with the liberal studies requirements, please contact Academic Advisement at 724-738-2009, Academic Services at 724-738-2012, Academic Records and Summer School at 724-738-2010, or Retention Services at 724-7382011.

## Academic Major

In addition to the liberal studies requirements, the university requires students to select a major or a curricular area of concentration. Students are typically responsible for meeting the major requirements in effect at the time they enter the university or change majors. When the students leave the university and are later readmitted, they become responsible for meeting the major requirements in effect at the time they are readmitted.

If students would benefit from meeting a set of major requirements other than those in effect at the time they declared their major or were admitted/readmitted to the university, their advisor may request of the students' academic dean that a different set of major requirements be met.

At the time of enrollment or by the end of the sophomore year, students must select a major. The university encourages students to select during their early semesters the exploratory (undeclared) student status if they have uncertainty or apprehension about the choice of a major. If students desire to change their major, they must complete, with departmental chairperson's signature, the change of major form in the Office of Academic Records and Summer School.

Using their criteria, departments determine the admission or rejection of students into their departments to pursue their major. Students may obtain these criteria from the departmental advisor or chairperson. Course requirements for a major may not be taken using a Pass/No Credit grade option. Courses taken within a student's first major department may not be used to meet any Liberal Studies program requirements.

Students may declare a second major by completing a Declaration of Second Major form. The requirements for all majors must be completed prior to the awarding of the student's first baccalaureate degree. Once graduated, students may not return and add additional majors to their undergraduate record. Undergraduate courses taken after graduating will be recorded as post baccalaureate courses on the transcript.

Students may earn two majors simultaneously; they may not earn two degrees. Also, the university's modern language requirement is a bachelor of arts degree requirement and not a requirement of a major. Therefore, a student earning a second major would not be required to complete the modern language requirement for the second major. If the student's initial degree required the modern language requirement, the student would be expected to meet the requirement.

All academic majors must consist of at least 30 credits; at least 12 of which must be completed at SRU and 15 of which must be at the upper division (numbered 300 or above).

## Academic Minor

A minor is a set of courses that meet specified guidelines and is designed to allow a sub-major concentration in an academic discipline or in a specific area within a discipline. Unlike a specialization or a concentration, the minor is recorded on the students' transcripts, providing the students have maintained a 2.000 minimum quality point average for all coursework required for the minor. Courses used to meet the academic requirements of a minor may not be taken on a Pass/No Credit basis.

The minimum hours for a minor shall be no fewer than 18 credit hours, excluding courses required for professional certification.

A minimum of 9 credit hours of the minor must be upper division. For each student at least 4 credits in the selected minor area must be outside his/her major area requirements or electives counted toward his/her major, and at least 6 credits must be completed at Slippery Rock University.

Ordinarily, a minor is a subset of some major. But, 1) a minor may concentrate on an area which involves two or more academic disciplines, each of which is related to the minor, (For example, no major exists in journalism, but the departments of English and communication jointly offer a minor in journalism, which includes courses from each of the disciplines) or 2) a minor may be offered in a discipline where no major is given. (For example, East Asian Studies.)

Students cannot major and minor in the same discipline/academic area. For example, they cannot major and minor in geography, but they can major in geography and minor in cartography.

Students may declare minors at any time by completing a Declaration of Minor form available in the Office of Academic Records and Summer School.

The requirements for all minors must be completed prior to the awarding of the first baccalaureate degree. Once graduated, students may not return and add additional minors to their undergraduate record. Additional coursework
taken after graduating will be recorded on the transcript as post baccalaureate courses. If students, however, are pursuing a second baccalaureate degree, the majors and minors completed will be added to the transcript under the second degree.

Students are typically responsible for meeting the minor requirements in effect at the time they enter the university or change minors. When students leave the university and are later readmitted, they become responsible for meeting the minor requirements in effect at the time they are readmitted.

If students would benefit from meeting a set of minor requirements other than those in effect at the time they declared their minor or were admitted/readmitted to the university, their advisor may request of the student's academic dean that a different set of minor requirements be met.

## Computer Literacy

All students entering Slippery Rock University Fall 2005 or after, must demonstrate computer literacy before they graduate. Computer literacy may be demonstrated by successfully passing the university computer literacy examination, or passing either CPSC 110 or 130 . Students who are exempted from CPSC 110 or 130 , as part of liberal studies of their major/minor are not exempted from the computer literacy requirement.

## Internships

Slippery Rock University offers a diverse program of internships through which students may earn from 1 to 12 credits. In some cases an internship or other field experience is required for a major. Internships provide students with an opportunity to apply their academic preparation in a variety of professional or occupational settings. Through an internship, students have the opportunity to expand their knowledge and to enhance their learning of the theories of academic disciplines and programs of study through appropriate career-related experiences and to provide them with the knowledge and experience necessary for obtaining certification or licensing. Students may enroll in semester, academic year, or summer internships with governmental agencies, private firms, or non-profit organizations both in the United States and abroad.

Students must have a minimal quality point average of 2.000 in their major (or program where applicable), and at least a 2.000 for all coursework, including the semester previous to placement. The agency, academic department or program may specify higher standards and/or other academic requirements. Acceptance into the internship program must occur prior to registration for the course. Registration in the course, however, does not guarantee placement in the field. Agency supervisors' evaluations are a requirement for completion of the internship and may be a factor in determining the final grade. Students must be at least a junior in good standing at the time they begin the internship.

Interested students should check with their major department for internship information in their fields. Students are permitted to earn no more than 15 credits of internship.

## Intensive Writing Courses

Every student must complete two intensive writing courses before graduating from Slippery Rock University. This is true regardless of the number of credits transferred from another institution to Slippery Rock University. Intensive writing courses may include courses in Liberal Studies as well as a student's major. Intensive writing requirements are in addition to the College Writing I and College Writing II courses every student must complete. Courses taken at other schools may not be used to meet the Intensive Writing requirement.

Once an intensive writing course is passed, it will be counted towards completion of the University Writing Across the Curriculum requirement even if it is later repeated and failed or is not designed as an intensive writing course when it is repeated.

## Special Recognition of Academic Achievement

Slippery Rock University faculty and administration place a high value on the academic accomplishments of its students. SRU's academic reputation and its stature in the community of universities are tied inextricably to the scholastic achievements of its students. The university's rich and extensive resources provide a foundation of support for the realization of this goal. Scholarly and dedicated university faculty strive to challenge students' intellectual development and their achievement of excellence. The university community believes that student efforts in the attainment of high levels of scholarship deserve appropriate recognition and officially acknowledges student achievement throughout the academic year.

## Academic Honors Convocation

In the Spring, the university observes its Academic Honors Convocation, a formal ceremony with regalia and academic procession. The convocation provides for the recognition of Deans' List students and the twenty students in the sophomore, junior, and senior classes who attain the highest cumulative averages for coursework completed at Slippery Rock University. These individuals are presented with the President's Award of Achievement. The convocation also serves to set the tone for an academic atmosphere where excellence in scholastic endeavors is given the highest priority.

## Academic Honors Month

During the month of April many of the university colleges and departments honor their students who have excelled academically. The events take various forms, including banquets that are held on and/or off campus where recognition awards are presented. In addition, the director of the Honors Program coordinates a month-long program of lectures, seminars and presentation of papers by Slippery Rock University students and faculty and by special guests.

## Deans' List

Undergraduate students who earn an adjusted semester quality point average of 3.500 or higher on a schedule of at least 12 new attempted and earned credits will achieve the Deans' List as long as their cumulative QPA is at least 2.000. Student teachers may achieve Dean's List status if they have earned 94 or more credits and have a cumulative QPA of 3.50 or higher at the end of the semester in which they student taught. Repeated courses and P/NC courses will not be computed into the 12 credit-hour minimum. The Office of University Public Relations will submit names of these students to their hometown newspaper for publication. During the Academic Honors Convocation, these students will be formally presented to the university community. There is no Deans' List during the summer term. Post-baccalaureate students are not eligible for the Dean's List.

## Honors at Graduation

At both the December and the May commencement ceremonies, the university recognizes students who have met the academic criteria for Latin honors.

- Undergraduates working on their first baccalaureate degree may qualify for honors at graduation. Postbaccalaureate students will not be eligible for these honors.
- A minimum of 60 credits must be earned at Slippery Rock University. These credits may include: all credit course work; all credits earned through SRU's credit by exam program, including the NLN Mobility Profile II, administered by the Department of Nursing; SRU credit earned with a "P" grade; and credits earned as a visiting student at another SSHE institution.
- Credits earned by any other form of credit by exam (AP, CLEP, PEP, DSST and NLN (other than the Mobility Profile II), credits earned at other universities (transfer \& transient) and non-SRU course work taken abroad will not count toward the 60 credit minimum.
- The following cumulative QPA's must be earned to qualify for honors at graduation.

Summa Cum Laude (With the Highest Honor) 3.800-4.000
Magna Cum Laude (With High Honor) 3.600-3.799
Cum Laude (With Honor) 3.500-3.599
No restrictions will apply to students who repeat grades of D or F and who still meet the criteria for honors at graduation.

At commencement the names of these honor students are specially designated in the commencement program. In addition, the Summa Cum Laude graduates wear medallions around their necks, which are gifts of the Slippery Rock University Alumni Association; Magna Cum Laude graduates wear white honor cords; and Cum Laude graduates wear green honor cord.

Recognition of honors at graduation will be based upon students' cumulative QPA at the end of the semester preceding graduation. Designation of honors on the university transcript will not be determined until the students' final semester grades are submitted and an official, final cumulative QPA is calculated.

## Academic Policies

Academic procedures and policies are subject to change at any time. Changes may involve course content, credit hours, program requirements, and program admission requirements among others. It is the students' responsibility to review their Degree Audit Report (DARS) and confer with their academic advisors, the appropriate academic department, and the Office of Academic Records regarding current academic procedures and policies.

Click on a link to be taken to the entry below.

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- Quality Point Average
- X Symbol
- Name Change
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- Readmission
- Records Policy
- Repeat of Courses

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- Completion of Degree/Certificate Requirements <br> - Exit Examinations <br> - Minimum Credit Hour and Quality Point Requirements <br> - Modern Language Requirement for BA Degree <br> - Residency <br> - Second Baccalaureate Degree <br> - Drop, Add, Withdrawal <br> - Final Examinations <br> - Freshman Cohort and Student Athlete Graduation Rate
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Procedures and Policies

- Semester Credit Load
- Senior Citizens
- Summer Sessions
- Testing for Advanced Placement
- Transcripts
- Transient Student Status
- Upper Division Course Work
- Visiting Students
- Withdrawal from the University


## Absence Policy

The Student Health Center will provide written verification when it confines students to their residences or the Health Center for 24 hours or longer. Written verification will be provided when a student is hospitalized if the Health Center is aware of the situation. The Health Center does not routinely issue statements verifying a brief student visit to the Health Center. Phone verification of Health Center visits may be provided to an instructor at the student's request. No confidential information about the student's health status can be released without the student's permission. The Provost and Vice President for Academic Affairs will be notified by the Health Center when a student is expected to be out of classes for an extended period of time. Faculty members will be notified through their deans' offices.

## Academic Advisors

Academic advisors are assigned in the freshman year by the students' major department or the Academic Advisement Center. Some departments may reassign their students to different academic advisors during the students' sophomore year. Secondary education students are assigned academic advisors by the department of secondary education/foundations of education in consultation with the content area department. Exploratory program students are assigned academic advisors by the Academic Advisement Center.

It is the academic advisors' responsibility to aid their advisees with their academic and educational plans. The advisors are not responsible for making certain that their advisees major and liberal studies requirements have been met. This is the sole responsibility of the students.

## Academic Complaints

Students who want to file an appeal concerning any academic matter should first contact their instructor. Barring resolution there, students should contact the appropriate departmental chairperson, then the appropriate dean. Further appeal is to be directed to the Provost and Vice President for Academic Affairs. Please refer to the university's Grade Appeal Policy.

## Academic Dismissal

Academic dismissal results with the third academic suspension. Students who have been academically dismissed may appeal to the Academic Dismissal Review Board after sitting out for one calendar year.

## Academic Integrity

The value of a Slippery Rock University education is determined by the quality and character of Slippery Rock University students and graduates. Therefore, students and student organizations are expected to uphold academic integrity.

- All academic work, including, but not limited to, papers, computer programs, assignments, and tests, must consist of the students' own work.
- Students are expected to learn and practice proper techniques for accurately citing resource material.
- Students are expected to be honest in all academic work, refraining from all forms of cheating.
- Students are expected to function as students, including, but no limited to, attending class regularly and completing all assignments and examinations.
Students charged with academic dishonesty will deal with either the coordinator of student standards or the course instructor or both. If the instructor handles the matter, the instructor is to inform the departmental chairperson of the problem and its resolution. The department chairperson is to forward the information to the appropriate dean who will then inform the Provost and Vice President for Academic Affairs. If the instructor decides to refer the matter to the Office of Student Standards, the coordinator of student standards will begin institutional action through an investigation into the matter. If there is sufficient cause, students will be notified of the charges brought against them under the Code of Conduct. The student may then face judicial action, in addition to the instructor's action, which may include a university hearing board that could lead to suspension or dismissal from the university.

Academic dishonesty may take many forms. Examples of academic dishonesty include, but are not limited to, the following:

- buying, selling, or trading papers, projects, or other assignments;
- using or attempting to use any unauthorized book, notes, or assistance from any person during a quiz or examination;
- plagiarizing and/or submitting the work of another as your own;
- fabricating information or citations;
- facilitating dishonest acts of others pertaining to academic work
- possessing unauthorized examinations;
- submitting, without instructor permission, work previously used;
- tampering with the academic work of another person;
- ghosting-taking a quiz or exam in place of a student or having any person take a quiz or exam in your place;
- any attempt to falsify an assigned grade or an examination, quiz, report, or program or in a grade book, document, or other record;
- any attempt, or actual, computer program theft; illegal use of software; inappropriate use of the Internet, such as, but not limited to, illegal or unauthorized transmissions; or improper access to any computer system or account;
- any attempt, or actual, collusion willfully giving or receiving unauthorized or unacknowledged assistance on any assignment (both parties to the collusion are considered responsible.)
- forging a faculty member's or administrator's signature on any card, form or document.


## Academic Probation

If the quality point average (QPA) for all courses attempted at Slippery Rock University is less than a 2.000 (C), the student will be placed on academic probation. Students on academic probation may continue at the university under conditions developed by the appropriate academic dean or the Director of Retention Services and agreed to by the students. Students will also be placed on academic probation whenever they earn less than a 1.000 semester QPA and have a cumulative QPA of 2.000 or higher.

## Academic Renewal

Students occasionally perform at an academic level that makes them ineligible to continue their studies, and they withdraw or are suspended from school. Subsequently, some want to resume their college work but find their previous academic record an obstacle.

Academic Renewal provides an opportunity for persons in this situation to apply for a fresh undergraduate start at Slippery Rock University on the basis that their entire prior undergraduate record be disregarded and they begin their college study again with no credits attempted or earned and no quality points earned. No transfer credits taken at any time will be used towards the completion of an SRU degree. Academic Renewal may be awarded to a student only once and is applicable only to students enrolled at Slippery Rock University.

Prior to applying for admission on this basis, at least five years must have elapsed since the end of the semester in which the applicant was last in attendance for credit at any college or university. The applicant must present evidence that the conditions which caused the poor academic record have changed so there is now a reasonable expectation that the applicant will perform satisfactorily if admitted.

Upon approval of the petition by the Director of Retention Services or dean of the college in which the student was enrolled prior to their withdrawal or suspension, the student will be admitted as a beginning freshman. Students showing competency in any area may be allowed advanced standing (without credit) or a waiver of requirements just as any entry-level student.

It should be noted that the prior record remains a part of the student's overall academic record, but none of it carries forward as part of a degree program. The date of the Academic Renewal will be entered on the student's transcript along with a statement prohibiting the use of previously earned credits and quality points in meeting degree requirements, computing grade point average, graduation status, or academic dismissal. Students are cautioned that graduate and professional schools often compute a grade point average over all hours attempted when considering applicants for admission.

Application forms are available in the Office of Retention Services or the dean's office of each college within the university. The deadline for applying for academic renewal is at the end of the third week of the semester following the student's return to SRU

## Academic Suspension

Academic suspension will occur as a result of any of the following conditions:

1. Earning a QPA of less than 1.000 for any semester after the first semester and having a cumulative QPA of less than 2.000
2. Earning 90 or more semester credits (senior standing) and having a cumulative QPA less than 2.000
3. If the student is on academic probation for three consecutive semesters.
4. The following table outlines other conditions under which a student will be subject to academic suspension:

| Number of semesters | If quality point |
| :---: | :---: |
| the student has below a 2.0 cumulative QPA | deficiency is as below, <br> then suspension results |

6 or more

4
3 or more

5, 6, 7, 8
1 or more

Ordinarily, a first suspension is for a period of one semester; a second suspension is for a period of two semesters. All three summer sessions are considered as one semester for purposes of suspension. Students under suspension are not permitted to register for summer classes at Slippery Rock University.

Suspension may result whenever any student incurs grade deficiencies as stipulated above at the conclusion of any semester or summer session. Students who desire to take courses at another institution while on academic suspension should see Transient Student Status in this section.

## Attendance Policy

Slippery Rock University does not have a university-wide class attendance policy. Traditionally, attendance policies for individual classes have been determined by the instructor and communicated to the class at the first meeting and through the syllabus. The university believes, however, that class attendance, preparation, and participation are integral components of student success. It is unusual for a student to be successful in a class without attending, preparing, and participating regularly. Therefore, the faculty and administration strongly encourage students to attend every class session, to spend at least two hours in review and preparation for each hour in class, and to participate fully in all aspects of the class.

Attendance may be required for class meetings or field trips outside the regular schedule if such activities are listed as required in a course description in the catalog or in course syllabi. Instructors are asked to consider making allowances for absences occasioned by illness and by authorized activities for the benefit of the university. Arrangements to make up work because of class absences are the students' responsibility.

## Auditing Courses

Students desiring to audit courses (no credit awarded) must receive approval of their advisor. Normal registration procedures must be completed. The cost of auditing courses and taking courses for credit are the same. Students may not change from an audit status to a graded status (A-F and P/NC) or vice versa after the second week of the semester.

## Change of Major

Forms for changing majors may be obtained in the offices of the deans, Director of Academic Records and Summer School, academic departments or to the Academic Advisement Center. Students are reminded that they must meet the major academic requirements that are in effect at the time they declare a new major.

## Classification of Students

Undergraduate students are classified according to the number of semester credits completed.

$$
90-120 \text { semester credits or more senior }
$$

60-89 semester credits junior

Classification questions are to be directed to the Office of Academic Records and Summer School.

## Continuous Registration

The following basic requirement courses within the liberal studies program are subject to the university's continuous registration policy:

- Connecting Reading and Writing
- College Writing I
- College Writing II
- Public Speaking
- Developmental Mathematics
- Beginning Algebra

These courses will be graded as A, B, C, or NC (no credit) the first time taken. If an "NC" is earned, students must repeat the course during their next semester of enrollment if seats are available and must continue taking the course until it is passed with a grade of " C " or better. When these basic competency courses are repeated, they will be graded as A, B, C, or F.

Once classes begin, students are not permitted to drop or withdraw from one of the basic competency courses listed above.

## Course Levels

The following course numbering system is used: 100-199 are freshman level courses; 200-299 are sophomore level courses; 300-399 are junior level courses; 400-499 are senior level courses. Graduate courses are numbered 500-800. With approval of the dean, juniors and seniors having a 2.500 cumulative quality point average may enroll in 500 numbered courses for undergraduate credit. Only seniors with their dean's permission are permitted to register for graduate credit in courses numbered 500 and above. Post-baccalaureate students may take 500 level courses for undergraduate credit, and, with the permission of the dean of their college, 500 or 600 level courses for graduate credit. 600-800 level courses may not be taken for undergraduate credit.

## Credit by Examination

Under certain conditions it is possible for students to take credit courses by examination in a subject field. A grade of " P " or "NC" must be awarded but only passing grades will be recorded on students' records for coursework taken through Credit by Examination. Students may take Credit by Examination only once per course. Further information is available in the offices of the deans and in the Office of Academic Records and Summer School. See Testing for Advanced Placement in this catalog.

## Credit for Military Service

Slippery Rock University awards credit for military service and military schooling. Credit is not awarded solely for the completion of basic training or for Military Occupational Specialties (MOS).

To receive credit for military service, a student must submit a DD214 or other official military record documenting a minimum of one year of continuous active duty. Students meeting this requirement will be awarded three credits of basic military science.

Students may receive credit for military schooling, regardless of the length of active or inactive duty, by submitting a DD214, Army/ACE Registry Transcript (AARTS), Sailor/Marine/ACE Registry Transcript (SMART) or other official military record documenting completion of military coursework. Credit is not awarded for military occupation specialities (MOS).

All evaluations are based upon the recommendations found in the American Council on Education's "Guidebook to the Evaluation of Educational Experiences in the Armed Services."

Students should submit their DD214 and all applicable military educational records to the Executive Director of Academic Records, Summer School, and Graduate Studies - Room 107, Old Main.

## Degree Requirements

## Application for Graduation

Students must make formal application to the Office of Academic Records and Summer School by the end of the seventh week of the semester/term in which they expect to graduate. A diploma fee is payable at that time. Students who are eligible for a teaching certificate should apply to the College of Education at the time they apply for graduation. A certification fee is payable at the time of application. (Students who expect to teach in Pennsylvania must take a physical examination and a chest X-ray or a tuberculin skin test during their senior year. Arrangements must be made with the university health center at the beginning of the last semester of the senior year.) Students who apply for Pennsylvania certification must also submit a criminal record clearance form. The application fee for graduation is nontransferable and cannot be updated to another semester if the student fails to graduate, but the certification fee may be refunded.

Students who meet all graduation requirements in a given term but fail to apply for graduation and/or pay their graduation fee until after the semester ends will be graduated at the end of the semester in which their application is received in the Office of Academic Records and Summer School, not the term they completed their coursework.

## Completion of Degree/Certificate Requirements

It is the students' responsibility to complete all degree/certificate requirements and to know the university's requirements for graduation. This is not the responsibility of the students' advisors.

Students must meet all graduation requirements by the official end of the semester in which they have applied to graduate. Failure to do so (Incomplete grades in any course or "X" grades in required courses, no application, etc.) will result in the updating of the students' graduation date to the end of the term/year the work is eventually completed.

## Exit Examinations

Some students are required to take specific standardized examinations in liberal studies and/or their major area of study before their degrees will be conferred.

## Minimum Credit Hour and Quality Point Requirements

All degree programs require a minimum of 120 credits. At least 30 credits must be completed to earn a major and at least 15 credits must be completed to earn a minor. The majority of programs require minimum cumulative and major quality point averages of 2.000 ; some programs require a higher average. This information is available from the department advisor or chairperson. To be eligible for teacher certification, students entering fall 2003 or thereafter, must have a 3.000 cumulative average in all university coursework.

## Modern Language Requirement for BA Degree

Proficiency at the 103 class level of a modern language, or the equivalent, is required for all bachelor of arts degree candidates. Exemption by placement or examination is possible. The modern language courses used to satisfy the BA requirement may not be used in the goal or enrichment section of the global community block of the liberal studies program.

## Residency

To qualify for graduation, all students must complete their last 30 credits in residence at Slippery Rock University. In addition, at least 24 credits of upper division course work, 12 credits within the student's major and 4 credits within a minor must be earned in residence at Slippery Rock University. Students should check with their academic advisor to determine the residency requirement for their specific academic program.

## Second Baccalaureate Degree

If students complete, simultaneously, the requirements of two-degree programs, only one degree will be conferred at commencement. The university transcript will record, both majors but only the degree eared in a student's first academic major.

If students desire to earn a second baccalaureate degree at Slippery Rock University, they may do so by:

- enrolling as a post-baccalaureate student and,
- taking a minimum of 30 credits at SRU after the first baccalaureate degree,
- meeting departmental requirements for the degree in respect to the required credits and courses for a major in that department, and
- meeting degree requirements in respect to courses required for the requested degree.

Latin Honors at graduation will not be awarded to second-degree candidates, nor are post-baccalaureate students eligible for the dean's list.

## Drop, Add, Withdrawal

Full semester courses may be added during the first two weeks of the semester, but permission by the professor is required after the first week of of classes. Students desiring to add closed sections on courses for which they have the required pre-correquiste must always receive their professor's approval. Courses dropped during the first week of the semester will not be recorded on the students' permanent records unless they withdraw from all their classes, in which case grades of " W " will be awarded. Students may withdraw from classes with a grade of " W " between the second and tenth weeks of the semester. Students will not be permitted to withdraw from classes after the tenth week and will be held accountable and awarded a final grade for all coursework, exams and other work assigned during the final five weeks of the semester. For courses meeting fewer than 15 weeks, the withdrawal deadline is two thirds of the way through the course's beginning and ending dates. Students may not drop or withdraw from basic competency courses,
with the exception of physical education/dance activity courses in the liberal studies program, once the semester has started.

Yellow drop/add cards may be used to add classes until the end of the second week of the semester, and until the end of the first week of the term to drop classes. After the first week of the semester, student may no longer drop classes, but may withdraw from classes with a grade of " W " by using a blue withdrawal card.

Students who for exceptional reasons, are permitted to drop, add, or withdraw from classes after the university's stated deadlines must receive their respective dean's approval and will be charged $\$ 15$ for each transaction.

## Final Examinations

At the end of each semester, all final examinations are administered during the time stipulated in the examination schedule, which is printed in the master schedule of course offerings. The decision to give a final examination is the prerogative of faculty members; but if a final examination is given, it is to be administered according to the time as indicated in the examination schedule. The appropriate dean must approve any exceptions to this policy. Classes will meet during the scheduled examination time if no examinations are given.

## Freshman Cohort and Student Athlete Graduation Rate

In accordance with the Students Right to Know and Campus Security Act (PL 101-542) as amended by the Higher Education Technical Amendments of 1991 (PL 102-26), Slippery Rock University will publish the graduation rate of its first time, full-time degree seeking undergraduates in each of its Master Class schedules. This information is also available in a more detailed format from the Office of Academic Records and Summer School and at the university's Student Consumer website: www.sru.edu/pages/1257.asp

## Grade Information

## Procedure for Filing Grade Appeal

## Academic Due Process Procedures

The purpose of the following procedure is to provide students with a system by which to grieve complaints of alleged academic injustice(s) relating to a final grade and/or professional responsibilities. Students should have protection through orderly procedures against unsubstantiated academic evaluation. Students who believe that their final course grade reflects unsubstantiated academic evaluation may initiate and pursue a grade change appeal in accordance with provisions of this document. At the same time, all academic rights and privileges of faculty members are to be honored in this process, which includes careful review of the course syllabus. Changes in final course grades will occur only when, as a result of this grade appeal process, there is clear evidence of unsubstantiated academic evaluation.

Since the grade process involves the instructor's judgment of the academic performance of a student the only issue under consideration in the grade appeal process is whether or not the student can present clear evidence that the assignment of the grade was based on factors other than the academic judgment of the instructor.

Some examples of the basis for a legitimate disagreement could include, but not be limited to prejudiced, capricious, or unsubstantiated academic evaluation by the instructor:

1. The instructor did not inform the student of the basis for calculation of grades.
2. The instructor did not calculate the student's grade in accordance with the instructor's stated policy for calculating grades. Significant and unwarranted deviation from grading procedures and course outlines set at
the beginning of the course (ordinarily during the first week of the course) or a grade assigned arbitrarily and capriciously on the basis of whim, impulse or caprice.
3. There is an error in the computation of the grade that was not corrected.
4. The student, through no fault of his or her own, was not provided with the same opportunity to complete the requirements for the course in terms, for example, of time, access to materials, or access to the instructor as the other students.

A student may not claim arbitrariness and capriciousness if he/she disagrees with the subjective professional evaluation of the instructor.

## The following steps must be followed in the appeals procedure:

## Informal Procedure:

1. The student must discuss the final course grade, grading practices and assignments with the instructor who gave the final grade. This discussion may eliminate any misunderstandings over the assignment of the grade as relates to the course syllabus. This discussion must occur no later than $\mathbf{1 0}$ days after the beginning of the semester (not summer) following the issuance of the final grade.
2. If the faculty member finds in the student's favor, a grade change card is submitted with signatures and the appeal process is resolved.

If a student and instructor fail to resolve the grade dispute through informal means the student may request a formal grade appeal process by completing a Final Grade Appeal Form that may be obtained in the Office of Academic Records and Summer School.

## Formal Procedure:

## Step One - Instructor

The student must complete and submit the "student" portion of the Final Grade Appeal Form to the course instructor no later than $\mathbf{2 1}$ days after the beginning of the semester following the issuance of the final grade. The summer term does not constitute a semester.

- The student must retain a copy of the Final Grade Appeal Form for his/her records and send a copy to the department chairperson (or substitute). The chairperson of the department evaluation committee shall substitute for the department chairperson IF the department chairperson was the instructor of the course in which the grade is being appealed.
- The department chairperson (or substitute) is to confirm that the instructor is aware of the grade appeal and is to inquire as to the instructor's planned response.
- If the instructor decides that the final grade is correct, he/she must complete the "instructor" portion of the Final Grade Appeal Form, and return it to the student and send a copy to the chairperson (or substitute) within 14 days of receipt of the student's appeal.
- If an instructor fails to respond within the allotted time, the appeal shall move to step 2 below.

If a faculty member whose grade(s) are being appealed is no longer employed by the university or is unavailable due to a sabbatical, sick leave, or other reasons during the time period allotted for the appeal process, the appeal should be directed to the chair of the department's evaluation committee for review.

## Step Two - Department Chairperson

If the student wishes to appeal further, he/she must submit the original Final Grade Appeal Form (or copy if the instructor fails to respond as described in step 1 above) to the department chairperson (or substitute). This appeal must be submitted within $\mathbf{1 4}$ days of the dated instructor's response, or if the instructor does not respond, within $\mathbf{2 8}$ days after the appeal was originally filed with the instructor. A copy of the Final Grade Appeal Form must be forwarded to the college dean.

- The department chairperson (or substitute) will review the appeal within 7 days.
- Before the department chairperson (or substitute) determines if the student's complaint provides evidence that the instructor's assignment of the grade was based on factors other than the academic judgment of the instructor he/she will review the appeal with the instructor.
- The chairperson (or substitute) may also conduct whatever informal investigation seems necessary and should attempt to achieve a negotiated settlement.
- If the department chairperson (or substitute) determines the student's evidence does not meet the criteria for a grade appeal, the chairperson (or substitute) will forward his/her decision on the grade appeal to the college dean.
- A copy of the Final Grade Appeal Form must be forwarded to the student and the instructor.
- If the department chairperson (or substitute) determines the student's evidence does meet the criteria for a grade appeal, he/she will recommend in writing to the instructor a course of action to amend the grade.
- The instructor must indicate on the Final Grade Appeal Form whether he/she agrees or disagrees with the chairperson's recommendation, signs and returns the Final Grade Appeal Form to the chairperson within 7 days.
- If the instructor amends the grade, a signed grade change card is submitted and the grade appeal is ended.
- If the instructor does not agree to amend the grade or fails to respond in the allotted time, the chairperson (or substitute) submits the Final Grade Appeal Form to the college dean with his/her recommendation within 7 days. A copy of the recommendation must be forwarded to the student and the instructor.


## Step Three - Dean

- If the dean, upon review of the chairperson's recommendation, also determines the student's evidence does not meet the criteria for a grade appeal, the dean will complete and return the Grade Appeal Form to the student with a copy to the instructor and chairperson (or substitute) within $\mathbf{7}$ days. The grade appeal process ends.
- If the dean, upon review of the chairperson's recommendation, determines that the student's evidence does meet the criteria for a grade appeal, the dean shall initiate a meeting with the faculty member. The dean shall review the appeal, can hear evidence by each side, and may collect further evidence as desirable.
- If agreement cannot be reached, the dean will forward the Final Grade Appeal Form to the Provost and Vice President for Academic Affairs within 7 days, with his/her recommendation that the grade appeal be referred to a Grade Appeal Board. A copy of the Final Grade Appeal Form must be forwarded to the student, instructor, and chairperson.

In each of the above statements, the chairperson of the department evaluation committee shall substitute for the department chairperson IF the department chairperson was the instructor of the course in which the grade is being appealed. Should the chair of the evaluation committee not be available, APSCUF will be consulted in the process in choosing the substitute.

## Composition of Grade Appeal Board

- Three faculty recommended by APSCUF. One from the academic department in which the course is taught. Not the instructor.
- Two managers selected by the provost. One to be the dean of the college in which the course was taught.
- One student recommended by Student Government Association. A senior major in the department in which the course is taught.
- Normally, each Grade Appeal Board will be appointed to hear one appeal.
- Those responsible for recommending board members should be sensitive to race and gender composition.
- The provost will appoint each board and chairperson within the parameters above.


## Grade Appeal Board Procedures

Each Grade Appeal Board is to determine its procedures for hearing the grade appeal. Normally, both the student and the instructor will be given an opportunity to state his/her case before the board.

Students who appeal a grade to a Grade Appeal Board are responsible for maintaining ALL written materials relevant to the appeal, such as papers, examinations, and completed assignments. Further, the appeals board must have access to appropriate documentation and academic records pertaining to the course grade in question.

After the appeals process is complete, the only record to be maintained will be the student's final grade.
Each appeals board will make its recommendation to the university president, who may accept or reject the recommendation.

Since the university president has the power and duty to direct the activities of the institution, nothing in this policy should be construed as to diminish that authority in any way.

## Grade Change

Once a grade has been posted, it can only be changed by the professor who originally awarded the grade. Grade changes must be processed on a grade change card and must be approved by the professor and the chairperson of the department in which the course was offered.

A memorandum of explanation from both instructor and departmental chairperson must accompany any grade change submitted after more than a year has passed since the student received the original grade. This information is submitted to the Office of Academic Records and Summer School. Students who attended a full semester class beyond the 10th week may not have their grades changed to a withdrawal "W" without their dean's approval.

## Grade Release Policy

Students' midterm grades and final grades are available on the university's ROCKTALK telephone and web-based systems.

In accordance with the Family Educational Rights and Privacy Act (FERPA) grades will not be released to a third party (including parents) without the written permission of the students.

Grading Symbols and Quality Point Conversion System

| A - Excellent | 4 quality points |
| :--- | ---: |
| B - Good | 3 quality points |
| C - Satisfactory | 2 quality points |
| D - Poor | 1 quality point |
| F - Failure | 0 quality points |
| I - Incomplete | 0 quality points |
| P - Pass | 0 quality points |
| NC - No Credit | 0 quality points |
| AU - Audit | 0 quality points |
| W - Withdrawal | 0 quality points |
| X - No grade given | 0 quality points |

## Grading System and Policies

Instructors are to inform their students in writing during the first week of classes of their grading procedures and policies, especially explaining how final grades are calculated.

## Incomplete Grades

The assignment of an incomplete grade is the prerogative of the faculty and is granted only when extenuating circumstances prevent students from completing the course requirements within the regular time period. Faculty also reserve the right to set any deadline for the completion of the incomplete work; however, students not receiving an earlier deadline will have a maximum of 12 months after receiving the incomplete to finish all coursework and receive a change of grade. If a faculty member does not submit a grade change card within 12 months, regardless of whether or not the student attends the university, the grade will automatically convert to an " F ". Requests for extensions of incomplete grades, beyond 12 months, must be submitted by the faculty member and approved by the dean of the college in which the course was offered. Students will not be permitted to graduate with an incomplete grade on their record.

## Pass-No Credit Grades

Students may schedule a maximum of 12 credits of pass-no credit grading in the sophomore, junior and senior years combined. Students must select these courses at registration and cannot change the pass-no credit designations after the second week of the semester. For these 12 credits, only free elective courses may be taken on a pass-no credit basis. Pass-no credit courses may not be used to satisfy major, minor, intensive writing, the BA modern language, and the university's liberal studies program requirements. Some selected courses are not included in the 12-credit limitation. Students may not take more than one pass-no credit course during a semester.

Courses taken under the pass-no credit system are not used in computing the QPA. Credit for such courses is recorded toward meeting the total credit requirements if the course is passed. A grade of NC (no credit) will be recorded if the course is failed.

Pass-no credit is not synonymous with audit. In pass-no credit, all course requirements must be met.

## Quality Point Average

Quality points for a single course are calculated by multiplying the points assigned the letter grade ( $\mathrm{A}=4, \mathrm{~B}=3, \mathrm{C}=2$, $\mathrm{D}=1, \mathrm{~F}=0$ ) by the number of credits of the course. Total quality points are calculated by adding the quality points earned in each course. The quality point average (QPA) is computed by dividing the total quality points earned by the total number of credits attempted, (repeated courses are counted only once). Grades earned in courses taken at other colleges for transfer are not computed in the quality point average at Slippery Rock University unless the courses were taken with Slippery Rock University's approval as a "Visiting Student" or "Distance Education Student" at another PA State System of Higher Education university. Further explanation concerning the calculation of the QPA may be directed to the student's academic adviser, the Advisement Center or the Office of Academic Records and Summer School.

## X Symbol

The symbol "X" means "no grade given." This symbol will be used only in those rare situations when professors cannot assign students a letter grade or incomplete.

The " X " symbol will not affect the students' semester or cumulative QPA at the time it is given. However, the "X" symbol must be removed from the students' record prior to the end of the students' next semester of enrollment. Otherwise, it will be converted automatically to an "F" and will then be used in the students' semester and cumulative QPA calculations. The " X " symbol cannot be extended beyond the students' next semester of enrollment.

If graduating students receive an " X " during their final semester of enrollment, they will be permitted to graduate as long as the course in question is not required for graduation.

## Name Change

Students may have their names changed on official university records only after submitting an official document (marriage certificate, court record, etc.) or a notarized statement that a name change has occurred and the new name is not being used for any deceptive or fraudulent purpose. Copies of the university's policy and a sample affidavit are available from the Office of Academic Records and Summer School.

## Prerequisites and Co-requisites

Students should not register for courses until they have completed all the appropriate prerequisites or are registered for the appropriate co-requisites as noted in the university catalog. The university's computer has been programmed to check for pre/co-requisites. Professors reserve the right to withdraw students who have not completed/registered for the appropriate pre/co-requisites for their classes.

## Readmission

Students who have interrupted their attendance at SRU for any reason may resume studies at Slippery Rock University by applying for readmission to the dean in whose college they previously studied, or the Director of Retention Services (even if they will change their major after entering the university). This must be done at least one month prior to the beginning of the semester/term in which they wish to enter. Students must submit official transcripts from all schools attended after leaving SRU before a readmission decision will be made. Credits earned at another college or university
while they are not attending SRU may not be eligible for transfer to Slippery Rock University. Using a transient clearance form, students must obtain approval from their department and at times, their dean before taking the courses to ensure the transferability of credits to Slippery Rock University. Grades earned, as a transient student, will not be computed into the student's SRU grade point average. Readmitted students are responsible for meeting all academic requirements in effect at the time they are readmitted, not at the time they were originally admitted to the university.

## Records Policy

(Family Educational Rights and Privacy Act, PL 93-380; and "Right to Know Law" PA PL 390)
The Family Education Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review their education records within 45 days of the day the university receives a request for access.

Students should submit to the Director of Academic Records and Summer School, dean, department chairperson, or other appropriate official, written requests that identify the record(s) they wish to inspect. The university official will make arrangements 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 university official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The rights to request the amendment of their education records that they believe are inaccurate or misleading.

Students may ask the university to amend a record that they believe is inaccurate or misleading. They should write the university official responsible for the record, clearly identify the part(s) of the record they want changed, and specify why it is inaccurate or misleading.

If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information contained in their education records, except to the extent that FERPA authorizes disclosure without consent.

One exception that permits disclosure without consent is disclosure 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 or company 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 or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities.

Upon request, the university may disclose education records without consent to officials of another school in which a student seeks or intends to enroll.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Slippery Rock University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education

400 Maryland Avenue, SW
Washington, DC 20202-4605
Copies of the university's policy governing the Family Education Rights and Privacy Act are available in the Office of Academic Records and Summer School, 107 Old Main. Questions concerning FERPA should be referred to the Executive Director of Academic Records, Summer School and Graduate Studies.

## Repeat of Courses

Students may attempt to improve their quality point average by repeating courses. The most recent grade earned is used in calculating the QPA even if the earlier grade was higher. If a passed course is repeated and failed (or NC), the student will lose both the quality points and credits previously earned. However, all grades will appear on the transcript. Courses in which grades of D, F, and NC were earned at Slippery Rock University may not be repeated at any institution other than as a visiting student at another State System of Higher Education university for transfer to Slippery Rock University.

Students who repeat a course must do so using the same grading system under which they originally took the course. For example, a student who originally took a course graded A-F may not repeat the course on a P/NC or audit basis. Students may not repeat a course by using any Credit by Examination program if they originally took the course on a graded (A-F), P/NC or audit basis.

## Semester Credit Load

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The number of credits a student may carry is determined by the cumulative quality point average as follows:

- If the cumulative QPA is less than 2.000 , students are limited to a maximum of 16 credits, inclusive of any repeat courses that are scheduled.
- If the cumulative QPA is 2.000 to 2.499 , a maximum load of 18 credits is permitted.
- If the cumulative QPA is 2.500 or above, a maximum of 21 credits is permitted. An additional fee is charged for each credit in excess of 18 .


## Senior Citizens

Senior citizens (typically persons 62 or older, who are receiving social security or equivalent benefits) may audit courses at no cost at Slippery Rock University on a space available basis. Senior citizens must supply provide proof of retirement benefits, name, address, and social security number to the Office of Academic Records and Summer School in order to complete registration. Senior citizens may register for classes no earlier than one week prior to the start of the semester/term. Senior citizens taking courses for credit are responsible for paying all applicable fees with the exception of tuition.

## Summer Sessions

Summer sessions at Slippery Rock University are scheduled over a eleven-week period as follow: Pre-session (two and one-half weeks), Session I (four weeks) and Session II (four weeks). Information on the summer sessions is made available through a special summer bulletin, which may be obtained from the Office of Academic Records and Summer School.

## Testing for Advanced Placement

Students may qualify to earn a maximum of 45 credits by making satisfactory scores on tests administered through special examination programs, and thereby earn credit or be exempt from certain college courses. Students may not repeat a course by using Credit by Examination if they originally took the course on a graded (A-F), P/NC or audit basis. Credits earned by examination may not be used as part of the students' final 30 credits to be earned at the university.

- The Advanced Placement Program (AP) of the College Entrance Examination Board permits high school students to earn college credits at their schools while attending high school. Students must first take an advanced placement course prior to the advanced placement exam. Scores of three or higher will normally be awarded college credit. High school counselors may assist in this procedure
- Departments at the university offer credit by examination for some courses. Approval for these tests should be secured from the faculty advisor, instructor, and appropriate departmental chairperson.
- The College Level Examination Program (CLEP) is administered by The College Board. This program is open to all students who meet the eligibility criteria. Under the program, students who feel their knowledge of certain subjects is extensive may elect to take the CLEP exams, which are of two types: general and subject. The general examinations are designed to reflect the learning that ordinarily takes place in the students' first two years of college. The subject examinations are designed to reflect the more specific knowledge which students may have acquired. General examinations each carry 6 credits. Subject examinations each carry 3-4 credits. Upon successfully passing an examination with a score at or above the American Council on Education's recommended minimum score, students will receive credit for the corresponding course(s), which permits registration in more advanced courses. Information on CLEP is available from the Office of Academic Records and Summer School and at the following website: www.colleboard.com/clep
- The university also awards credit for a limited number of ACT's Proficiency Exam Program (PEP) exams and DSST exams offered by the Armed Services. Students may contact the Office of Academic Records and Summer School for a list of acceptable PEP and DSST exams.


## Transcripts

Students may obtain official transcripts of their academic records from the Office of Academic Records and Summer School by written request. Each copy costs $\$ 3.00$ and written requests should include a check or money order made payable to Slippery Rock University. Students requesting that a transcript be faxed are assessed an additonal $\$ 2.00$ faxed transcript fee (for a total of \$5.00). Transcripts are typically processed in 24-48 hours. Students requesting "same day" service will be charged $\$ 10$ per transcript ( $\$ 12$ per transcript if faxed). A complimentary copy of the transcript is sent to all students upon graduation. Transcripts are not released to students who have outstanding financial obligations to the university. The University only issues OFFICIAL transcripts. Unofficial transcripts do not exist.

A student's academic transcript will indicate any disciplinary action taken that leads to separation from the institution. That is, should a student be suspended or dismissed from the university under the provisions of the Code of Conduct, a notation will be placed on the student's transcript for the duration of the sanction. The notation will be removed upon expiration or by action of the vice president for student affairs.

## Transient Student Status

Slippery Rock University students who are in good academic standing, or who are under academic probation/suspension and plan to take courses at another institution for transfer back to Slippery Rock University must complete and have approved by their advisor, chairperson and dean (if suspended) a transient student clearance form and comply with all regulations cited on that form. Students will not be permitted to take any of their final 30 credits as a transient student. Credit will not be awarded for transient courses determined by the Executive Director of Academic Records, Summer School and Graduate Studies to duplicate coursework already posted on students' SRU records. Transient credit will be awarded for courses in which grades of "C-" or better have been earned. Grades earned as a transient student will not be computed in a student's SRU cumulative QPA. Copies of the transient student form are available in the departmental chairpersons' offices or the Office of Academic Records and Summer School. Transient students may not take correspondence courses and credit earned by examination. Other policies governing transient status are available from the Office of Academic Records and Summer School.

## Upper Division Course Work

All degrees require the completion of a minimum of 48 credit hours of upper division (typically 300 level and above) course work. Thirty-nine of the 48 credits must be at the 300 level or higher, the additional 9 credits can include any course requiring a 3 credit hour prerequisite. At least 24 of the 48 credits must be completed at Slippery Rock University.

At least half a student's major ( 15 hours minimum) must consist of upper division course work. At least 9 credit hours of a student's minor must be taken at the upper division level.

Students with fewer than 45 credits (Sophomore II) must have the permission of the instructor to enroll in 300 and 400 level courses.

## Visiting Students

Students desiring to transfer credit and grades earned at other universities in the Pennsylvania State System of Higher Education back to Slippery Rock University may do so as "visiting students." Courses taken under this program are treated the same as courses taken at Slippery Rock University in computing the students' QPA. A special form, with a list of program requirements, is available in the Office of Academic Records and Summer School and must be approved bythe students' advisor or chairperson, academic dean, and the Executive Director of Academic Records, Summer School and Graduate Studies.

## Withdrawal from the University

Students who withdraw from the university must either complete an official withdrawal form obtainable at the offices of Academic Records and Summer School or Retention Services, notify the Director of Retention Services via a signed and dated letter of their intention to withdraw.

Students will be officially withdrawn from the university on the date the offices of Academic Records and Summer School or Retention Services receive notification in writing of their intent to withdraw, not the last day of class attendance.

It is expected that students living on-campus will move out of their residence hall and cease eating in the university's cafeterias immediately after withdrawing from school.

Students withdrawing from the university up to the last day of classes will be awarded withdrawal grades of "W" in all classes. Students waiting to withdraw from the university after the last day of classes (final exam week) will be withdrawn on the last day of the semester/term and will not be awarded a withdrawal grade in any class.

## Academic Programs

## Slippery Rock University

Slippery Rock University

## Career Services

103 Maltby Center
724-738-2028

Associate Directors<br>Anthony Linnan<br>John Snyder

## Assistant Director

Penny Birch

## Secretaries

Deena Edwards
Lisa Theodorson

Career Services offers services to assist students in planning and securing a satisfying career. The services include appointments for selecting a major and career counseling, career interest inventory assessment, on-campus professional interviews, on-campus and off-campus job fairs, job vacancy listings, video-taped mock interviews, administration of several standardized tests including Praxis, LSAT, MAT, and the GRE Subject tests, and resource information about summer and professional employers, graduate schools, and job search preparation and strategies. Career Services provides a technology-based career resource center that is equipped with Dell computers, HP laser printers and supporting software. DISCOVER, a web based vocational guidance program is available to assist students to engage in career assessment and exploration. Students are able to respond to internship and employment opportunities advertised on the internet to access employer information, and to develop quality resumes and cover letters in printed form or for electronic transmission.

Undergraduate students are encouraged to contact the office for information about summer and/or part-time off-campus employment opportunities. The office web page provides more details about services and staff www.sru.edu/career.

## Honors

128 Founders Hall
724-738-3722

## Director

Steven Strain

## Secretary

Julie Graham
Slippery Rock University's Honors Program is designed to enrich the university experience by fostering a studentcentered learning environment and helping each student develop her or his individual potential as a life-long learner. Designed to encourage critical thinking and communication skills, honors courses emphasize reading, writing and research and encourage students to assume responsibility for their learning experiences, both on and off campus, through discussion-based classes and by participating in service-learning opportunities. Students in the program are fine scholars, but they are also committed to taking full advantage of their years spent at Slippery Rock University by participating in the extra-curricular and travel opportunities which the program offers.

All honors courses fulfill liberal studies requirements, which means that participation in the program will not extend a student's stay at Slippery Rock University. To graduate with an honors designation, students must complete a minimum of seven honors courses ( 21 credits) while maintaining an overall QPA of 3.25 or higher. Students may select from a variety of specially-designed courses in the following departments: communication, computer science, English, government and public affairs, history, mathematics, music, philosophy, biology, chemistry, geography, allied health, and environmental science.

Students also have the opportunity to take Great Books courses, which are geared toward extensive reading in a specialized area. Content of these seminars varies from semester to semester and have included, The Holocaust (Germany), Latin American History (Panama), Galileo (Florence), and Irish Playwrites (Ireland). Because a research component is required, this course can be especially valuable for students contemplating graduate education. In addition, the program has an honors thesis option, which would count as a 3-credit 300-level course.

Honors students enjoy a number of benefits, both in and out of the classroom, including seminar-style classrooms where enrollment is typically capped at 20 or 25 students per class; early registration privileges; and learning experiences through national and international travel opportunities. In recent years, students have presented at national honors conferences in Chicago, Los Angeles, Brooklyn and at regional conferences in Puerto Rico, Gettysburg, and the Adirondacks. In addition, courses are offered every spring and summer, which include travel abroad; in the past, students have traveled to Turkey, South Africa, and Ecuador.

The program is open to all qualified students, regardless of their major field of interest. Interested students must enroll formally by completing an application and submitting a one-page typed essay in which they discuss what they hope to gain from their university experience. If you are interested in participating, please call 724-738-3722 or e-mail honorsprogram@sru.edu

# Institute for Community, Service-Learning, and Nonprofit Leadership 

Lowry Center<br>724-738-CARE(2273)

## Director

Alice Kaiser-Drobney

## Special Programs Coordinator

Laurel Dagnon

## Secretary

Becky Cress
Slippery Rock University students, joined by faculty, staff and others lead the way to make a difference. SRU's nationally recognized Institute for Community, Service-Learning, and Nonprofit Leadership operates a system for leveraging social capital to develop socially responsible, civic-minded youth. The Institute prepares people, in partnership with their communities, to connect intellect, interpersonal skills, and personal passion for purposeful action that adds value to both the lives of students who serve and those they serve.

Community service, volunteerism, and service-learning are significant elements in the curricular and co-curricular experiences of Slippery Rock University students. The climate for service at Slippery Rock University is dramatic:

- The new I-CARE House, located in New Castle, PA, is at once a comprehensive community center and service-learning field site where students across all majors use academic skills to enhance quality of life in a low-income neighborhood.
- The university supports the AmeriCorps program where thirty-five students earn up to $\$ 1800$ toward payment of educational costs.
- All elementary and special education majors participate in a service-learning workshop and complete a minimum of two service-learning components in their coursework.
- Environmental studies majors complete 100 hours of service for graduation.
- Sport management majors provide 200 hours of service prior to graduation.
- More than eighty faculty include service-learning or volunteer projects as part of their course requirements.
- More than 200 classes with service-learning components are offered across all academic colleges each semester.
- Dozens of faculty members have received service-learning mini-grants to underwrite the costs of service components.
- The number of international service-learning experiences and course-based, credit-bearing service-learning opportunities grow each year, including preparation of a civil society summit that will take place in the Czech Republic and an English course focusing on fiction and social issues of California.
- Service learning is one of the three required components in the Honors Program.

Through the Institute and the Department of Government and Public Affairs, students can earn a national certificate from American Humanics, the nation's only certifying body for entry-level human services and nonprofit professionals. The certificate is offered at fewer than 100 colleges and universities across the United States and is linked to eighteen major nonprofit organizations such as Big Brothers, Big Sisters, American Red Cross, YMCA, and YWCA. This program and the AmeriCorps program provide students with the skills necessary for a career path or a personal goal of working in a non-profit, non-governmental organization. The courses in the Humanics Certificate are intended to meet and enhance the three criteria for service-learning experiences: training for, participation in, and evaluation of meaningful public service opportunities. All students are invited to visit the Institute for Community, Service-Learning, and Nonprofit Leadership that is located in Lowry Center and are encouraged to become involved.

## International Initiatives

## 110 Eisenberg Building

724-738-2057

## Director

Donald E. Kerchis

## Coordinator for International Admissions

Pamela Frigot
International Student Advisor
Kelly Slogar

## Secretaries

Denise Barger, Brenda McKissick

## International Student Services

To promote multi-cultural awareness, the university actively seeks international students. In recognition of their unique needs, the office of international initiatives admits international students, providing support services, such as orientation to the United States and Slippery Rock University; immigration information and assistance (processing work for visa and passport renewal, extensions of stay, work permits, etc.); support for the Internations Club; registration; counseling and personal adjustment problems; and community liaison services.

## Study Abroad Opportunities

Slippery Rock University provides students with a global understanding of the world so that they may gain the international understanding necessary to be informed citizens. The university encourages its students to explore the appropriateness of studying abroad. This can be an integral part of the students' university experience, providing personal growth, cultural understanding and job opportunities.

Study abroad programs are conducted during the academic year, summer, and during winter vacation. Over 250 students annually study overseas. The following represents the current study abroad opportunities with which Slippery Rock University is formally associated.

Australia (Melbourne) - Established in 2001, students can earn 12-15 credits studying at Victoria University.
Austria (Vienna) - This popular overseas program is located in beautiful Vienna, Austria, where students can earn 1215 credits each semester. Emphasis is on German language, and culture, and music.

Bulgaria (Blagoevrad) - Established in 1992 with the American University in Bulgaria. Students may earn 12-15 credits per semester

China (Nanjing) - Established in 2001 with Nanjing University. Students can earn 12-15 credits per semester in Chinese language, history, and culture. (A minimum of one semester of Chinese is required.)

Costa Rica (San Jose) - Students can earn 12-15 credits per semester studying at the University of Costa Rica.

England (Middlesburgh) - Established in 1991 with Teesside University. Students majoring in business and liberal arts may earn 12-15 credits per semester.

France (Cannes) - Students can earn 12-15 credits per semester studying at The College Internationale de Cannes. Emphasis is on French language, culture, history and business.

Germany - Since 1982 students fluent in German may study at 1 of 12 German universities earning 12-15 credits per semester in their major and German.

Hungary (Budapest) - Established in 1989 with the Semmelweiss University, physical education students can earn 1215 credits during the spring semester.

Ireland (Dublin) - Education majors student teaching in the fall semester can teach in selected Irish public schools and live with Irish host families.

Ireland (Limerick) - Students can spend the fall semester at the University of Limerick where they can earn 12-15 credits in liberal arts, physical education, and business.

Japan (Osaka) - Kansai Gaidai University and Slippery Rock University have exchanged students since 1979. Students can earn 12-15 credits per semester in Japanese language, business, social sciences, and humanities (a minimum of one semester of Japanese is required).

Korea (Chuncheon) - Established in 1988 with Kangwon National University, students can earn 12-15 credits per semester emphasis is on Korean language and culture. (A minimum of one semester of Korean language is required.)

Mexico (Mexico City) - Established in 1996 with Iberoamericana University in Mexico students may earn 12-15 credits per semester

Poland (Poznan) - Established in 1994 with the Academy of Fine Arts in Poznan. Students can earn 12-15 credits per semester in art.

Russia (Moscow) - Established in 1993 with the Pushkin Institute where students can earn 12-15 credits per semester. (A minimum of 1 semester of Russian is required; summer intensive Russian language classes are available)

Scotland (Edinburgh) - Established in 1991 with Queen Margaret College. Students majoring in communications may earn 12-15 credits per semester.

Slovakia (Bratislava) - Established in 1991 with Comenius University and the Academy of Fine Arts. Students majoring in liberal arts and art may earn 12-15 credits per semester.

Spain (Seville) - Every semester students can study in Seville at the Institute of International Studies, associated with the University of Seville, where they can earn 12-15 credits. Emphasis on Spanish language, culture, history and business.

Wales (Aberystwyth) - Established in 1997 with Aberystwyth University. Students can earn 12-15 credits per semester in all majors.

## International Business Internships

Every summer students may secure internship positions in England and Scotland for 10 weeks, earning up to 12 credits working for British companies, organizations or multinational corporations.

## Summer Programs

Summer courses are offered by Slippery Rock University professors at eight overseas centers. The programs vary from three to four weeks, and three-to-nine credit hours may be earned. Current summer programs are conducted in:

- Canada (Stratford, Ontario)
- Costa Rica (San Jose)
- England (London)
- France (Cannes)
- Ireland (Dublin)
- Spain
- Russia


## January/March Seminars

Selected courses will have an overseas component during January or March.

## Honors Cultural Seminar

During spring vacation selected honors students will be provided a cultural experience in an international setting.
Financial aid received by students may be applied to SRU sponsored programs. Special travel stipends are available to SRU students. The office of international initiatives also provides students with assistance in making travel arrangements, passport application, international student I.D., and international youth hostels.

## Pre-Law

For the past two decades, faculty members in political science and philosophy have taken the lead in advising the majority of SRU's future attorneys. While law schools have advised us that students may prepare for the study of law through a variety of academic majors or programs, students interested in legal education will benefit from seeking the advice of faculty with experience in counseling the many students who have successfully gone on to law school and the practice of law from Slippery Rock University.

Students at Slippery Rock University have succeeded at law schools across the country, including Fordham, Georgetown, Emory, Maryland, American, Florida, Temple, Syracuse, as well as Harvard and Yale. In almost any given year, SRU students who have worked with our program advisors will also be attending regional programs at the University of Pittsburgh, Duquesne, and Penn State, Dickenson.

Students who are interested in preparing for a legal education and pursuing a career in law are strongly encouraged to make appointments and speak with Dr. Richard Martin 724-738-2434 or Dr. Walter Powell 724-738-2432 in the

Department of Political Science, located in the Spotts World Culture Building. These faculty members will work with students to design a course of studies suited to individual interests and needs. This service is intended for all students regardless of major.

## College of Business, Information, and Social Sciences

105 Eisenberg Building<br>724-738-2008

Dean
Bruce W. Russell

## Assistant to the Dean

Larry McCarthy
Administrative Assistant
Barbara P. Porter
Secretary
Leigh McGuirk

## Departments

School of Business
Communication
Computer Science
Military Science
Political Science
Sociology, Anthropology and Social Work
Slippery Rock University's College of Business, Information, and Social Sciences is comprised of six academic departments: communication, computer science, military science, political science sociology/anthropology/social work and the School of Business which includes the programs of accounting, economics, finance, health services management, human resource management, international business, management, and marketing.

Increasingly, information and information processing are becoming more important in daily life. Businesses are becoming more involved with information and its processing as both a product and a service. People, too, feel the effects of this rapidly developing emphasis upon information. The university enhances opportunities for students to keep pace with a continually changing society. The information, social science, and business administration programs are thus united as one college to provide focus and unity for the students.

Students majoring in the College of Business, Information, and Social Sciences must satisfy the university's liberal studies program requirements in addition to meeting specific major degree requirements. Study in the liberal arts, which contributes to life-long happiness and productivity, assists in developing skills in such areas as oral and written communication, problem-solving, and mathematics. With specific departmental degree requirements, students who major in the College of Business, Information, and Social Sciences are assured of both breadth and depth of knowledge. The social sciences provide students with a disciplined approach to both the theories and methodologies that will assist them in understanding society and culture. The curriculum is committed to creating a learning environment of self-awareness and a sense of perpetual growth and development. Disciplines include: government, military science, anthropology, political science, sociology, criminology, and social work.

The College of Business, Information, and Social Sciences also combines popular and rapidly changing fields of study, supported with modern technological equipment and facilities for such areas as computer science, information systems, information technology, multimedia technology, journalism and broadcasting.

Students who have inquiries regarding programs in the College of Business, Information, and Social Sciences should contact specific departmental chairpersons or the office of the dean of the college.

## Applied Science (BS)

## (120 Credits)

This degree completion program is designed for students who have already earned an associate degree from an accredited two-year institution, including proprietary and technical schools. The associate degree program must include a technical major of at least 35 credit hours. A maximum of 67 credit hours completed at a two-year, technical or proprietary institution may transfer to Slippery Rock University. Up to a maximum of 45 credits earned at the sending institution shall be used to meet liberal studies requirements.

The achievement of an associate degree certifies the adequacy and completeness of the technical training and clearly defines applied science as a transfer program. Once accepted as candidates for the bachelor of science with a major in applied science, students must complete the following requirements:

## Program Requirements - Credits: 120 (including transfer credits)

## Professional Block

Students must complete the 12 -credit professional block designed to prepare them to assume leadership roles. Note: Prerequisites for core courses include: for PSYC 210 any 3 credit Psychology course, and for COMM 318 senior status and familiarity with personal computers.

These courses are:

- COMM 318 - Professional Presentation Credits: 3
- MGMT 250 - Principles of Management Credits: 3


## One of the Following:

- COMM 315 - Organizational Communication Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
or
- PSYC 210 - Introduction to Industrial-Organizational Psychology Credits: 3

And one of the Following:

- PHIL 324 - Environmental Ethics Credits: 3
or
- PHIL 325 - Medical/Health Care Ethics Credits: 3
or
- PHIL 326 - Business Ethics Credits: 3


## A Student is Required to Have One of the Following:

The Applied Technology Management Specialization:

- Two MGMT Electives at the 300 level or higher
- ACCT 205-Accounting for Decision Makers Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or
- ECON 202 - Principles of Microeconomics Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Or A University Approved Minor.
Or An Advisor Approved Specialization with a Minimum of 15 Credits.
At least one course from each of the following groups is recommended:

## Computer Science Group:

- CPSC 142 Credits: 3 (Prerequisite is ASSD 110)
- CPSC 144 Credits: 3 (Prerequisite is ASSD 110)
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3

Writing group:

Two writing intensive courses.

- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 306-Advanced Technical and Scientific Writing Credits: 3
(Prerequisite is ENGL 205)
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3


## The Center for Government Contracting Assistance

212 East Cooper Street<br>724-738-2346

## Contracting Specialist

Renee Decker

[^0]The GCAC is a full service procurement technical assistance center. It's primary function is to enhance economic revitalization by bringing federal, state and local contract dollars into the area. The GCAC uses an advanced computerized marketing system to notify companies of federal, state and local bidding opportunities. It also provides education and training on government contracting policies and procedures through regularly scheduled seminars and through individual counseling sessions with companies.

## Communication

222 Eisenberg Building
724-738-2032

## Chair <br> Mark Zeltner

## Assistant Chair

Mark Chase

## Secretary <br> Marilyn Garczynski

## Faculty

Richard Arthur, Mark Banks, Brett Barnett, Mark Chase, Robert Fidoten, Thomas Flynn, Jennifer Foster, Joseph Harry, James Laux, Christine Pease-Hernandez, Alison Plessinger, Thomas Stewart, Valerie Swarts, Jennifer Foster, Amy Walters, Mark Zeltner

Communication is the means whereby relationships are created and sustained. Studying communication offers students the opportunity to learn about communication as well as to prepare for careers as widely diverse as broadcasting, audio and video production, web site and electronic graphics design, interactive multimedia production, journalism, public relations, speech and public address, and other related professions.

The Department of Communication offers both the Bachelor of Arts (BA) and the Bachelor of Science (BS) degrees. The BA emphasizes a broad liberal arts approach to communication, with five emphasis areas that include broadcasting/media production, public relations and corporate communication, print and broadcast journalism, emerging technologies and multimedia, and speech communication.

The BS degree emphasizes a more concentrated, skill-based approach in one of three tracks: public relations, journalism, and emerging technologies and multimedia.

Students in either degree program will have courses available in several areas. In broadcasting and emerging technologies, courses cover not only the traditional audio and video media, but also multimedia, web design, streaming media, and digital recording and editing in a new $\$ 200,000$ multimedia laboratory. The explosion of technology and ecommerce has created a huge demand for individuals who can design, produce, and evaluate multimedia programs.

Courses in public and corporate communication cover such areas as public relations writing and campaign design, traditional and new media communication formats, Internet and intranet-based resources, and the latest desktop publishing, graphics, and corporate media capabilities.

Students emphasizing journalism study both the basics of print and broadcast journalism, plus advanced courses in journalism applications, including opportunities for involvement with the campus newspaper, radio, television, and Internet streaming and publishing. The department's active internship program affords qualified students in all areas the opportunity to test and develop their knowledge and skills.

Throughout the communication program at Slippery Rock, there is an emphasis on the integration of all communication forms and media. By completing a core of courses distributed among all the areas of communication, students are prepared in an all-encompassing array of concepts and skill development in this fast-changing discipline.

The all digital Television Studio, a three-camera color facility, located at 101 Vincent Science Hall, is a newly remodeled facility with a control room, offices, and the studio. The television news: studio production, television news: field production, and the broadcast announcing classes use the facility as a component of the broadcast journalism curriculum. The offices of the student production organization, WSRU-TV, are also located at the facility. This student organization produces variety and interview programs for distribution on the campus cable network.

## Communication (BA)

## Requirements for the Major - Credits:39

Students are required to complete a program of 39 credit hours, including COMM 110, COMM 310, COMM 410, and COMM 413. The balance of the program is defined for each student by selecting courses from several levels in consultation with the advisor. All students in the Communication major must maintain an overall QPA of 2.5 to enroll in COMM 310 and COMM 410 or to graduate with a Communication degree.

The Bachelor of Arts degree requires proficiency at the 103 level of a modern language or the equivalent.
Students may transfer credits from other institutions toward the major but must earn at least 15 credits in communication from Slippery Rock University. At least 9 of these credits must be from courses numbered 300 or above, including at least 3 credits from courses numbered 400 or above.

- COMM 110-Communication Concepts Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 410 - Communication Law Credits: 3
- COMM 413-Communication Theory Credits: 3


## A Minimum of a 2.0 is Required in Each of the Following Courses:

- COMM 110 - Communication Concepts Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 410- Communication Law Credits: 3


## Degree Completion in Four Years Communication (BA)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- COMM Elective - Credits: 3
- Language 101, 102 - Credits: 6
- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 11
- COMM 110 - Communication Concepts Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103-College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Language 103 - Credits: 3
- Liberal Studies Courses - Credits: 12
- COMM Electives - Credits: 12
- COMM 200 - Public Speaking Credits: 3

Junior Year - Total Hours: 30

- COMM Electives - Credits: 12
- Free Electives/Minor - Credits: 6
- Liberal Studies Courses - Credits: 9
- COMM 310-Communication Research Methods Credits: 3

Senior Year - Total Hours: 30

- COMM Electives - Credits: 6
- Free Electives/Minor - Credits: 21
- COMM 410-Communication Law Credits: 3

Internship Option - Credits: 3-12

## Communication (BS)

## Requirements for the Major - Credits: 56-59

All students in the Communication major must maintain an overall QPA of 2.5 to enroll in COMM 310 and COMM 410 or to graduate with a Communication degree.

A minimum of a 2.0 is required in each of the following courses: COMM 110,310 and 410.
Required Courses - Credits: 56

Students are required to complete a course of study of 56 credit hours. A common core of 17 credits is required for all tracks, including:

- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 393 - Junior Seminar Credits: 1
- COMM 410 - Communication Law Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## The Balance of the Program is Defined for Each Track as Follows

## Emerging Technology and Multimedia

Technology Skills - Credits: 15
Design Skills - Credits: 3
Management/Interpersonal Skills - Credits: 6
Applied Communication-Credits: 3
Communication Electives - Credits: 6
Including: Business or Presentation Skills, Publication/Visual Skills, Multimedia, and Video Production. Students in this track are required to take CPSC 130, and CPSC 140, as part of their Liberal Studies program.

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3


## Degree Completion in Four Years Communication (BS - Emerging Technologies)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 9
- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Courses - Credits: 12
- COMM 200 - Public Speaking Credits: 3
- COMM 232 - Publication Production Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3

Junior Year - Total Hours: 29

- COMM Elective - Credits: 3
- Liberal Studies Courses - Credits: 16
- COMM 310-Communication Research Methods Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- COMM 362 - Mass Media and Society Credits: 3
- COMM 393 - Junior Seminar Credits: 1

Senior Year - Total Hours: 30

- COMM Electives - Credits: 3
- Liberal Studies Courses - Credits: 3-14
- COMM 353 - Media Project Credits: 3
- COMM 410 - Communication Law Credits: 3
- COMM 449-Communication Projects Credits: 3 or
- COMM 450 - Internship Credits: 3 to 12
- COMM 459 - Issues in Communication Technologies Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Public Relations

## Core Communication Requirements - Credits: 17

Public Relations Emphasis - Credits: 27
Message Production and Preparation - Credits: 6
Communication Project or Internship - Credits: 3
(COMM 449 or COMM 450)
Business or Marketing - Credits: 3

- COMM 449 - Communication Projects Credits: 3
or
- COMM 450 - Internship Credits: 3 to 12


## Degree Completion in Four Years Communication (BS - Public Relations)

## Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 15
- COMM 110 - Communication Concepts Credits: 3
- COMM 112 - Message and Content Design Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 31

- Liberal Studies Courses - Credits: 13
- COMM 200 - Public Speaking Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 231 - Introduction to Public Relations Credits: 3
- COMM 232 - Publication Production Credits: 3
- COMM 242 - News Writing Credits: 3
- COMM 362 - Mass Media and Society Credits: 3


## Junior Year - Total Hours: 31

- Business/Marketing Elective - Credits: 3
- Liberal Studies Courses - Credits: 12
- Internship - Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 315 - Organizational Communication Credits: 3
- COMM 332 - Case Studies in Public Relations and Integrated Communications Credits: 3
- COMM 333 - Public Relations Writing Credits: 3
- COMM 393 - Junior Seminar Credits: 1


## Senior Year - Total Hours: 27

- Message Prod. \& Prep. Electives - Credits: 6
- Elective - Credits: 3
- Liberal Studies Courses - Credits: 8
- COMM 312 - Argumentation Credits: 3 or COMM 415
- COMM 410-Communication Law Credits: 3
- COMM 415 - Persuasion Credits: 3 or COMM 312
- COMM 431 - Public Relations and Integrated Communications Campaigns Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Journalism

Core Communication Requirements. - Credits: 17
Journalism Emphasis - Credits: 18
Including 3 credits in Applied Communication (COMM 449: Communication Project, or COMM 450: Communication Internship.)

## Communication Electives - Credits: 18

Distributed in the areas of Print Journalism, Broadcast Journalism, and Media Concepts. Students must take at least 2 courses from Media Concepts block, and a least one course from remaining two blocks.

- COMM 449 - Communication Projects Credits: 3 or
- COMM 450 - Internship Credits: 3 to 12


## Degree Completion in Four Years Communication (BS - Journalism)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 18
- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- COMM Electives - Credits: 6
- Liberal Studies Courses - Credits: 12
- COMM 200 - Public Speaking Credits: 3
- COMM 242 - News Writing Credits: 3
- COMM 348-Advanced Reporting Credits: 3
- COMM 362 - Mass Media and Society Credits: 3


## Junior Year - Total Hours: 31

- COMM Elective - Credits: 3
- Liberal Studies Courses - Credits: 15
- COMM 310-Communication Research Methods Credits: 3
- COMM 343 - Feature Journalism Credits: 3
- COMM 344 - The Editorial Function: Copy Credits: 3
- COMM 346 - Investigative Reporting Credits: 3
- COMM 393 - Junior Seminar Credits: 1

Senior Year - Total Hours: 28

- COMM Electives - Credits: 12
- Liberal Studies Courses - Credits: 12
- COMM 410 - Communication Law Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Minor in Communication

Internship: only 3 credits may be counted toward the minor.
Students interested in a communication minor will have an advisor from their major department, but they are encouraged to seek assistance in choosing the appropriate communication courses from a faculty member in the Department of Communication.

Students must have a minimum 2.5 QPA overall.
Students may transfer up to 9 communication credits from other institutions. Transfer students must earn at least 3 credits at the 300 level and 3 credits at the 400 level at Slippery Rock University.

## Requirements for a Minor in Communication - Credits: 21

Students planning to minor in communication are required to take 21 credits of communication coursework, excluding COMM 200.

## Required Core

- COMM 110 - Communication Concepts Credits: 3
- COMM 310 - Communication Research Methods Credits: 3
- COMM 410 - Communication Law Credits: 3


## In Place of COMM 310, Students May Substitute One of the Following Courses:

- HIST 205 - Historians Craft Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- POLS 310 - Research Methods Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 318 - Research Methods Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SPMT 599 - Sport Management Research Management Credits: 3


## Electives - Credits: 12

Three must be at the 300/400 level, and three must be at the 400 level.

## Footnote

* In place of COMM 310, students may substitute one of the following courses:
- HIST 205 - Historians Craft Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- POLS 310 - Research Methods Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 318 - Research Methods Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SPMT 599 - Sport Management Research Management Credits: 3


## Internship:

Only 3 credits may be counted toward the minor.

## Computer Science

106 Maltby Center
724-738-2040

## Chair

David Valentine
Assistant Chairperson
Deborah Whitfield

## Secretary

Karen Busi

## Faculty

Michael Conlon, David Dailey, Adel Fergany, Frank Hulick, Patricia Joseph, Sharadchandra Joshi, Paul Mullins, Sam Thangiah, David Valentine, Deborah Whitfield, Hongbo Zhou

The Department of Computer Science offers majors and minors in three programs. Each major prepares the student for challenging careers in computing. Moreover, each major is flexible enough to allow a wide selection of other courses from the Department of Computer Science or other departments within the University. With proper planning and selection of appropriate minor or individual courses the student majoring in any one of the three programs will enable every student to meet his/her academic goal in four years.

## Computer Science (BS)

The major in computer science emphasizes modern approaches to software and hardware development and requires mastery of abstract concepts. Theoretical subjects are included for essential conceptual foundations along with practical applications of theory. Computer science majors are offered an entrance to all facets of the dynamic computer field. This degree offers solid preparation for graduate study in computer science or applied areas involving computing.

Graduation requirements for all students pursuing the bachelor of science degree with the major of computer science include a minimum 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Electives, and a minimum 2.000 quality point average in all course-work completed at Slippery Rock University.

For transfer students to earn the bachelor of science degree with a major in computer science, the required course work for the major must include a minimum of six computer science courses ( 18 credits) at the 200 level or above, at least two of which must be at the 400 level, and completed at Slippery Rock University.

## Requirements for the Major - Credits: 70

## Required Courses - Credits: 46

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3
- CPSC 378 - Theory of Computation Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- ECON 219 - Business Statistics Credits: 3
or MGMT 219 or MATH 152 Elementary Statistics
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
or MATH 235 Modern Concepts of Math or MATH 240 Linear Algebra and Differential Equations


## Required Electives - Credits: 12

(Maximum of 3 credits from CPSC 236 and CPSC 217; a maximum of 3 credits in CPSC 450 permitted.)

- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 370 - Assembly Language and Machine Organization Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## Required Science Courses - Credits: 13

Select From - Credits: 7-8
Chem 107, Chem 108 and Chem 111;
or
Phys 211 and Phys 212; or Phys 201 and Phys 202;
or
EGEO 101, EGEO 111, EGEO 102 and EGEO 112;
or
EGEO 101, EGEO 111 and EGEO 231;
or
EGEO 101, EGEO 111 and EGEO 241;
or
EGEO 121 and EGEO 221;
or
BIO 104 and one of BIO 201 or BIO 212 or BIO 250;
or
BIO 101 and one of BIO 201 or BIO 212 or BIO 250.

- BIOL 101 - General Biology Credits: 3
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107- General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 221 - Weather and Climate Forecasting Credits: 3
- EGEO 231 - Aerial Photography Interpretation Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5
- PHYS 211-General Physics I Credits: 4
- PHYS 212 - General Physics II Credits: 4


## Additional Science Courses

Select 5-6 Credit Hours

## Degree Completion in Four Years Computer Science (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- FYRST Seminar - Credits: 1
- Liberal Studies - Credits:9
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3 or ECON 219 or MGMT 219 Business Statistics
- MATH 225 - Calculus I Credits: 4

Sophomore Year - Total Hours: 29

- CPSC Elective - Credits: 3
- 2 Course Lab Science - Credits: 7
- Liberal Studies - Credits: 6
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 230 - Calculus II Credits: 4


## Junior Year - Total Hours: 30

- CPSC Electives - Credits: 6
- Liberal Studies - Credits: 9
- Liberal Studies at 300+ - Credits: 3
- Science Elective - Credits: 3
- CPSC 378- Theory of Computation Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3

Senior Year - Total Hours: 31-32

- CPSC Elective (may be lower division) - Credits: 3
- Math Electives (231 or 235 or 240) - Credits: 3 or 4
- Science Elective - Credits: 3
- Liberal Studies at 300+ - Credits: 3
- Free Electives - Credits: 10
- Free Electives at 300+ - Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 488 - Software Engineering Credits: 3


## Information Systems (BS)

The major in information systems emphasizes the application aspect of computer technology that will enable the student to solve problems in a variety of fields. Courses covering fundamentals of information technology as well as programming skills provide the foundation for essential conceptual knowledge and necessary practical relevance. In addition to completing the required computer science courses, an information systems major must complete the courses in one of the allied areas of specialization.

Graduation requirements for all students pursuing the bachelor of science degree with the major of information systems include a minimum 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Allied Area, and a minimum 2.000 quality point average in all course work completed at Slippery Rock University.

Note: For transfer students to earn the bachelor of science degree with a major in information systems, the required course work for the major must include a minimum of three computer science courses ( 9 credits) at the 200-level or above, at least two of which must be at the 300 level or above, and completed at Slippery Rock University.

## Requirements for the Major - Credits: 52-57

## Required Courses - Credits: 31

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300-Challenges of Computer Technology Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Three Hours From:

- CPSC 236 - Selected Computer Languages Credits: 3
or
- CPSC 305 - Introduction to Expert Systems Credits: 3
or
- CPSC 370 - Assembly Language and Machine Organization Credits: 3 or
- CPSC 450 - Internship Credits: 3 to 12


## Business Allied Courses

For An Allied Area in Accounting, Economics, Finance, Management, and Marketing, additional 9 hours are required:

- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
or
- MATH 225 - Calculus I Credits: 4

Accounting - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3 or ACCT 309 Cost Accounting I or ACCT 314 Intermediate Accounting II
- ACCT 313 - Intermediate Accounting I Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365


## Economics - Credits: 18

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 301 - Macroeconomic Analysis Credits: 3 or ECON 302 Microeconomics Analysis
- ECON 318 - Intermediate Statistical Analysis Credits: 3 or ECON 407 International Economics
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365

3 hours at 300 or 400 level in Economics.
Finance - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3 or FIN 323 Financial Markets and Institutions
- MGMT 251-Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365


## Management - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or ECON 202 Principles of Microeconomics
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365


## Marketing - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365
- MRKT 230 - Principles of Marketing Credits: 3
- MRKT 332 - Business Marketing Credits: 3 or MRKT 338 E-Commerce
- MRKT 333 - Consumer Behavior Credits: 3


## Degree Completion in Four Years Information Systems (BS)

## Completion Hours: 120

For Business Allied Areas of: Accounting, Economics, Finance, Management, Marketing

## Freshman Year - Credits: 30

- FYRST Seminar - Credits: 1
- Liberal Studies - Credits: 11
- Allied Area - Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3


## Sophomore Year - Total Hours: 30

- Allied Area - Credits: 3
- Liberal Studies - Credits: 10 or 11
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219 Business Statistics
- MATH 131 - Discrete Mathematics Credits: 3
or
- MATH 225 - Calculus I Credits: 4

Junior Year - Total Hours: 30

- Allied Area 300+ - Credits: 3
- Allied Area - Credits: 3
- Liberal Studies 300+- Credits: 6
- Free Elective - Credits: 3
- Liberal Studies - Credits: 9
- CPSC Elective - Credits: 3
- CPSC 343 - File Processing Credits: 3

Senior Year - Total Hours: 30

- Allied Area 300+ - Credits: 6
- Free Electives - Credits: 9
- Liberal Studies - Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3

Other Allied Areas

For Allied Areas in Administrative Psychology, Communication, English, Geological Technician, Human Factors, and Sport Management: 3 hours from:

- ECON 219 - Business Statistics Credits: 3 or MGMT 219 Business Statistics or MATH 122 Matrices and Linear Programming or MATH 123 Introduction to Applied Calculus


## Required Allied Area

(choose one area from the following areas):

## Administrative Psychology - Credits: 21

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 210 - Introduction to Industrial-Organizational Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3
- PSYC 310 - Organization and Management Credits: 3


## One Course from Each of the Pairs Below:

- PSYC 244
or
- PSYC 277
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- PSYC 377 - Social Psychology Credits: 3
- PSYC 449 - Seminar in Psychology Credits: 3

Communication - Credits: 21

Three credits from:

- COMM 110 - Communication Concepts Credits: 3 3 Credits


## Six Credits From:

- COMM 215 - Small Group Communication Credits: 3
- COMM 217 - Intercultural Communication Credits: 3
- COMM 231 - Introduction to Public Relations Credits: 3
- COMM 232 - Publication Production Credits: 3


## Six Credits From:

- COMM 258 - Interactive Multimedia I Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 315- Organizational Communication Credits: 3
- COMM 318 - Professional Presentation Credits: 3
- COMM 360-Corporate Media Credits: 3
- COMM 450 - Internship Credits: 3 to 12

Three Credits From:

- COMM 410 - Communication Law Credits: 3
- COMM 412 - Speech, Language \& Human Experience Credits: 3
- COMM 413 - Communication Theory Credits: 3


## Three Credits From:

- COMM 480 - The Communication Age Credits: 3

English - Credits: 24

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3

3 Hours of 300 or 400-Level English Courses.
Geological Technician - Credits: 23

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 201 - Earth Materials Credits: 3
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 360 - Introduction to Hydrology Credits: 3

Three Credits From:

- EGEO 231 - Aerial Photography Interpretation Credits: 3
or
- EGEO 241 - Geomorphology Credits: 3


## Three Credits From:

- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 or
- G\&ES 410 - Remote Sensing Credits: 3


## Human Factors - Credits: 21

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3


## One Of

- PSYC 303 - Learning Credits: 3
- PSYC 311 - Physiological Psychology Credits: 3

One Of

- PSYC 233 - Sensation \& Perception Credits: 3 or
- PSYC 338 - Cognitive Psychology Credits: 3

One Of

- PSYC 421 - Research Methods and Statistical Applications II Credits: 3 and/or
- PSYC 449 - Seminar in Psychology Credits: 3

Sport Management - Credits: 20

- PESM 286
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- SPMT 150-Practical Application Credits: 1 PESM 150-01, 150-02
- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3
- SPMT 394 - Sport Marketing Credits: 3
- SPMT 506-Sport Facility and Event Management Credits: 3


## Degree Completion in Four Year Information Systems (BS)

Completion Hours: 120
For Other Allied Areas of: Administrative Psychology, Communication, English, Geological Technician, Human Factors, Sport Management

Freshman Year - Total Hours: 30

- FYRST Seminar - Credits: 1
- MATH or Bus. Stats - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103-College Writing II Credits: 3


## Sophomore Year - Total Hours: 31

- Allied Area - Credits: 6
- Liberal Studies - Credits: 9
- COMM 200 - Public Speaking Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3


## Junior Year - Total Hours: 30

- CPSC Elective - Credits: 3
- Allied Area - Credits: 6
- Liberal Studies (300+ level) - Credits: 12
- Electives - Credits: 6
- CPSC 343 - File Processing Credits: 3


## Senior Year - Total Hours: 29

- Allied Area - Credits: 6
- Electives (300+ level) - Credits: 3
- Electives - Credits: 8
- COMM 413 - Communication Theory Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Information Technology (BS)

The Information Technology (IT) program provides students with an opportunity to examine information gathering, retrieval, management, and storage capabilities with respect to information technology. The program also provides students with tools and techniques needed for creating and maintaining highly interactive computer systems while strengthening the student's problem solving and critical thinking abilities. The scope of the program includes decision making, social and ethical professionalism, information management, incorporation of audio and video into software applications, computer networking, and system administration. Graduates of this program will possess technical abilities to maintain computing systems that are used not only by programmers and database managers, but also remotely by employees and often customers.

Graduation requirements for all students pursuing the bachelor of science degree with the major of information technology include a minimum of 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Electives, and a minimum 2.000 quality point average in all coursework completed at the university.

For transfer students to earn the bachelor of science degree with a major in information technology, the required coursework must include a minimum of four computer science courses ( 12 credits), at least two of which must be numbered 413 or above, completed at Slippery Rock University.

## Requirements for the Major - Credits: 57

## Required Courses - Credits: 42

- ART 114 - Basic Studio Digital Media Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3 or ECON/MGMT 219 Business Statistics


## Electives

Select 2 courses from one of the following areas:

## Management:

Any MGMT course numbered 300 or above. and

- MGMT 250 - Principles of Management Credits: 3


## Marketing:

Any MKTG course numbered 300 or above. and

- MRKT 230 - Principles of Marketing Credits: 3

Art:

- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Select 3 Courses

2 must be numbered 300 or above:

- ACCT 205-Accounting for Decision Makers Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 353 - Media Project Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365


## Degree Completion in Four Years Information Technology (BS)

## Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- CPSC IT Elective - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Free Elective - Credits: 6
- Liberal Studies - Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3
- COMM 200 - Public Speaking Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3 or ECON/MGMT 219 Business Statistics

Junior Year - Total Hours: 30

- MRKT/MGMT/ART Elective 300+ - Credits: 3
- 1 course in MRKT, MGMT or ART - Credits: 3
- Liberal Studies - Credits: 12
- CPSC IT Elective - Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 413 - Systems Analysis Credits: 3

Senior Year - Total Hours: 30

- Liberal Studies 300+ - Credits: 3
- Liberal Studies - Credits: 9
- CPSC IT Elective - Credits: 3
- Free Electives - Credits: 6
- CPSC 327 - Administration and Security Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Minor in Computer Science

For transfer students to earn a minor in computer science, the required course work for the minor must include a minimum of four computer science courses ( 12 credits) at the 200 level or above, at least two of which must be at the 400 level and completed at Slippery Rock University.

## Requirements for the Minor in Computer Science - Credits: 25

Minor in computer science requires a minimum 2.000 quality point average in computer science courses completed at Slippery Rock University to fulfill course requirements of the minor.

## Required Courses

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 370 - Assembly Language and Machine Organization Credits: 3
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3


## One Course (3 Credits) from the Following:

- CPSC 236 - Selected Computer Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 378 - Theory of Computation Credits: 3
- CPSC 450 - Internship Credits: 3 to 12

Maximum of three credits in CPSC 450 permitted.

- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## Two Courses (6 Credits) from the Following (not chosen above):

- CPSC 450 - Internship Credits: 3 to 12
- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## A Minimum of Two Courses

must be numbered 450 or above. These two upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

## Minor in Information Systems

## Requirements for the Minor in Information Systems - Credits: 24

Minor in information systems requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor

A minimum of three courses must be upper division (numbered 300 or above). These three upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

For transfer students to earn a minor in information systems, the required course work for the minor must include a minimum of four courses ( 12 credits) completed at Slippery Rock University. Of these four courses at least two must be in computer science one of which must be from CPSC 305, CPSC 343, or CPSC 413.

## Required Courses

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 230-Accounting Information Systems Credits: 3 or MGMT/CPSC 365 - Management Information Systems
- COMM 215 - Small Group Communication Credits: 3 or COMM 318-Professional Presentation
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3 or CPSC 140 - Introduction to Programming Principles
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
or CPSC 305 - Introduction to Expert Systems or COMM 480-The Communication Age
- CPSC 323 - Data Base Systems Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3


## Minor in Information Technology

Minor in information technology requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor.

A minimum of two courses must be upper division (numbered 300 or above). These two upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

For transfer students to earn a minor in information technology, the required course work for the minor must include a minimum of four courses ( 12 credits) completed at Slippery Rock University. Of these four courses at least two must be in computer science one of which must be at 300 -level or higher.

## Requirements for the Minor in Information Technology - Credits: 24

Minor in information technology requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor.

## Required Courses:

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 317 - Scripting Languages Credits: 3


## Two Courses - Credits: 6

- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365


## One Additional Course

## 3 Credits from:

- ACCT 205-Accounting for Decision Makers Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- COMM 350 - Editing for Video Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- ECON 219 - Business Statistics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MGMT 250 - Principles of Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Military Science (Army ROTC)

101 Strain Behavioral Science Building
724-738-2019

## Chair

Lieutenant Colonel William Bialozor

## Secretary

Deborah Kosciuszko

## Faculty

Lieutenant Colonel Willliam Bialozor, Major Stephen Sullivan
In 1981, Slippery Rock University was authorized as a Senior Reserve Officers Training Corps (ROTC) unit. The Army ROTC program offers to both men and women the opportunity to learn and practice leadership and managerial techniques; to obtain credits, which count toward graduation; and to earn a commission as a Second Lieutenant in the U.S. Army upon completion of the program.

What is Army ROTC? It is a program that offers students the opportunity to graduate as officers and serve in the U.S. Army, the Army National Guard, or the U.S. Army Reserve.

## Army ROTC

## The Four-Year Program:

The four-year program is divided into two parts: the Basic Course and the Advanced Course.
The Basic Course is usually taken during the first two years of college and covers such subjects as customs, traditions and organizations of the service, national defense, military history, and leadership development. In addition, a variety of outside social and professional enrichment activities are available. All necessary ROTC textbooks, uniforms, and other essential materials for the Basic Course are furnished at no cost. After completion of the Basic Course, students who have demonstrated the potential to become an officer and who have met the physical and scholastic standards are eligible to enroll in the Advanced Course. (Note: There is no military service obligation associated with taking any Basic Course electives. All electives earn academic credit.)

## Military Science

## Freshman Year - Total Hours: 6

- MS 100-The American Military Experience Credits: 3
- MS 102 - Principles of Leadership Credits: 3


## Sophomore Year - Total Hours: 6

- MS 201 - Basic Military Skills Credits: 3
- MS 202 - Intermediate Military Skills Credits: 3


## Junior Year - Total Hours: 8

- MS 301 - Fundamentals of Tactical Operations Credits: 4
- MS 302 - Advanced Military Skills Credits: 4


## Senior Year - Total Hours: 8

- MS 401 - Leadership Dimensions and Concepts Credits: 4
- MS 402 - Officership and the Profession of Arms Credits: 4


## The Two-Year Program:

The two-year program is designed for junior students and community college graduates, students at four-year colleges who did not take ROTC during their first two years of school, or students entering a two-year post-baccalaureate or graduate course of study.

To enter the two-year program, students must first attend a fully-paid five-week Leadership Training Course (LTC), normally held during the summer between the sophomore and junior years of college. At LTC, students learn to challenge themselves physically and mentally, and to build their confidence and self-respect.

After they have successfully completed LTC, students who meet all necessary enrollment requirements may enroll in the Advanced Course.

Students who have attended basic training/AIT also qualify for the two-year program.

Army ROTC offers two-year, three-year, and four-year scholarships on a competitive basis to the most outstanding students who apply. Three and two-year scholarships are awarded to students already enrolled in college. Students who attend the LTC in the two-year program may compete for two-year scholarships.

Each scholarship pays for college tuition and required educational fees and provides a specified amount for textbooks. Each scholarship also includes subsistence allowance of $\$ 2,500-\$ 4,000$ for every year the scholarship is in effect.

All cadets in the Advanced Course receive a subsistence allowance of $\$ 3,500-\$ 4,000$ for each of the two years (This is not in addition to the subsistence allowance provided to scholarship recipients), as well as pay for attending the fiveweek Leadership Development and Assessment Course during the summer between their Junior and Senior years.

## The Simultaneous Membership Program

Students who have not been awarded an ROTC scholarship can get a head start on their military careers and their future through the Simultaneous Membership Program (SMP). This program allows students to be members of the Army National Guard or the Army Reserve and Army ROTC at the same time.

SMP students are paid at the rate of at least a Sergeant (E-5) for their guard or reserve training assemblies, plus the aforementioned allowance from the ROTC Advanced Course. SMP students may also be eligible for additional federal and state educational benefits. They serve as officer trainees in their guard or reserve units and, under the close supervision of a commissioned officer, perform duties commensurate with those of a Second Lieutenant.

Cadets who successfully complete the SMP program graduate with a commission as a Second Lieutenant. Once commissioned, they may continue to serve in their Army National Guard or Army Reserve units, or they may apply for active duty in the U.S. Army.

Students can be in the SMP program all four years at college. They will be paid at the rate of Sergeant for only the last two years.

## Requirements for Enrollment

The general requirements for enrollment in Army ROTC stipulate that students be accepted as a regularly enrolled university student and be a citizen of the United States. Veterans and JROTC graduates may receive exemptions from the basic course as approved by the Professor of Military Science (PMS). For continuation in ROTC during the junior and senior years, students must have a 2.500 grade point average in their academic area, have successfully completed requirements for the Basic Course, pass a physical examination, and be accepted by the PMS. Advanced Course students must agree in writing to complete the junior and senior years.

## Minor in Leadership

## Requirements for the Minor

Cadets can earn a Minor in Leadership by completing all of the Military Science courses, the Leadership Development and Assessment Course the summer prior to graduation, and two additional elective courses. Students interested in this program should contact the Department of Military Science for more information.

## Political Science

Chair<br>Mark Daniels

## Secretary

## Faculty

George Brown, Mark Daniels, Heather Frederick, Alice Kaiser-Drobney, Donald Kerchis, Richard Martin, Daniel McIntosh, Walter Powell, Sharon Sykora
"Unlike the faculty at a lot of colleges and universities these days, the faculty at SRU was always incredibly accessible and helpful, always willing to discuss intellectual and social issues, and giving of their time on a personal level, as well. I've found that the opportunities I had to work one-on-one with professors like Rich Martin, Carol Prorok, and Bernie Freydberg served as a solid foundation for the student-faculty interaction I experienced at Yale Law School. My professors at SRU never allowed me to become complacent, and always challenged me to discover something new. For those who have the initiative to forge independent relationships with faculty at SRU, the rewards are terrific."
M. Lorrane Ford '94

Truman Scholar (Pa.) '93
Yale Law School '98
Attorney, Morrison \& Foerster LLP (New York, NY)

## Minor in American Politics

## Requirements for the Minor - Credits: 18

At least nine (9) of the required eighteen (18) hours must be at the 300 level or above.
A minimum of eighteen credits from the following:

- POLS 201
- POLS 101 - American National Government Credits: 3
- POLS 200 - State and Local Government Credits: 3
- POLS 224 - Civil Liberties Credits: 3
- POLS 321 - The Presidency Credits: 3
- POLS 323-The Courts Credits: 3
- POLS 325 - The Congress Credits: 3
- POLS 327 - Public Opinion and Political Attitudes Credits: 3
- POLS 360 - Parties and Elections Credits: 3
- POLS 375 - Women and Politics Credits: 3
- POLS 403 - Constitutional Law Credits: 3


## Minor in Community Service and Service-Learning

The minor in community service and service learning is intended to be useful to those students who may choose to follow either a career path or a personal goal of working within a non-profit, non-governmental organizational context. These courses prepare students to meet the three criteria for service learning experiences: training for, participating in, and evaluating meaningful public service opportunities.

Core Courses - Credits: 18

Note: For students who are interested in pre-law advisement please refer to the Program in Pre-law section.

- POLS 101 - American National Government Credits: 3
- POLS 151 - Introduction to Public Administration Credits: 3
- POLS 232 - Nonprofit Management Credits: 3
- POLS 255 - Introduction to Public Policy Credits: 3
- POLS 305 - Ethical Practice in Public Administration Credits: 3
- POLS 455 - The Politics of National Service and Civil Society Credits: 3


## Minor in Comparative Politics/International Relations

The minor requires the completion of a minimum of eighteen (18) credit hours which must be taken from the following:

## Requirements for the Minor - Credits: 18

Three courses from Comparative Politics:

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3

Three courses from International Relations and Politics:

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Minor in International Affairs

## Requirements for the Minor

The specific requirement for the minor in international affairs can be found in the Department of Government and Public Affairs. The requirements include eighteen hours, six at the 100 level, to be chosen from a variety of academic disciplines and a demonstrated proficiency in a foreign language at the 103 level.

## Minor in Political Science

## Required Courses - Credits: 18

At least 9 of the 18 required credits must be at the 300 level or above. No more than 9 of the 18 required credits may be in any one of the area elective blocks.

## Three Courses From Comparative Politics - Credits: 9

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3


## Three Courses From International Relations \& Politics - Credits: 9

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Minor in Public Administration

Students must complete 18 credits from teh list below. At least fifty percent of the courses must be taken at the 300 level or above. Not more than 6 credits of internship may be counted toward the 18 credits.

POLS 111 Grassroots Democracy
POLS 151 Introduction to Public Administration

POLS 205 Local Adminisration
POLS 232 Nonprofit Management

POLS 253 Administrative Law
POLS 255 Introduction to Public Policy
POLS 280 Community Development
POLS 305 Ethical Practice in Public Administration

POLS 331 Managing Human and Financial Community Resources
POLS 353 Resource Development and Grantwriting
POLS 359 Policy Analysis and Evaluation
POLS 450 Internship
POLS 455 The Politics of National Service and Civil Society

## Political Science (BA)

Are you interested in American politics? International affairs? Critical issues such as health, the environment, civil rights? Theories concerning the ideal government and how power and resources are allocated in society? Do you want to study these subjects and pursue a career based on your interest? If so, you should consider studying political science.

Political science students enjoy a versatility of skills and a marvelous range of exciting careers in federal, state and local governments; law; business; international organizations; nonprofit associations and organizations; campaign management and polling; journalism; pre-collegiate education; electoral politics; research and university and college teaching.

Members of the department assist students in developing a philosophy of life, acquiring meaningful civic roles, and learning the skills that are basic to political, social, and economic success. The preparation of students for continuous civic involvement, responsible citizenship in the academic community is encouraged through participation in department and university affairs. Students are encouraged to participate in the Model United Nations programs. Other organizations include Amnesty International, which takes responsibility of the university's Holocaust Remembrance programs. Students also have the opportunity to participate in Law Career Day conferences and travel and study abroad. Practical experience in politics is provided through class activities and the internship program that involves students in the work-a-day worlds of local communities, as well as state and national governments and businesses in Harrisburg and Washington, D.C.

## Requirements for the Major - Credits: 36

## Candidates for the Bachelor of Arts in Political Science Degree are Required:

1. to complete 36 credit hours of course work
2. to complete courses in five of the seven areas listed below.
3. to complete POLS 101 and one additional course in the American Political Institutions block.
4. to complete POLS 105 and one additional course in the Political Theory and Thought block.
5. to complete either POLS 103 or POLS 263 and one additional course in the block associated with the course elected.
6. to complete POLS 310, Research Methods.
7. to complete 18 hours in political science at the 300 or 400 level.
8. to complete $40 \%$ of the total number of hours counted towards graduation at the 300 or 400 level. (In order to accomplish this, students are strongly urged to use 300 or 400 level courses to complete their liberal studies enrichment courses.)

## In Addition, Students:

1. may complete an internship, POLS 450, of up to twelve hours, but not more than six of those hours may count toward the minimum requirement of thirty-six hours for completion of the major. Alternatively a student might complete the Harrisburg Internship Program, Pols 451, 452, and 454; but, again not more than six of those hours may count toward the minimum requirement of thirty-six hours for the completion of the major.
2. may elect to take as many elective courses beyond the required minimums as they choose, but not more than fifteen hours in any one block may count toward the minimum requirement of thirty-six hours for completion of the major.
3. earning a bachelor of arts degree must demonstrate a competency at the equivalent of the 103 level in a foreign language.

## American Political Institutions:

- POLS 101 - American National Government Credits: 3
- POLS 200 - State and Local Government Credits: 3
- POLS 300 - Intergovernmental Relations Credits: 3
- POLS 321 - The Presidency Credits: 3
- POLS 323 - The Courts Credits: 3
- POLS 325 - The Congress Credits: 3


## Political Behavior:

- POLS 310 - Research Methods Credits: 3
- POLS 327 - Public Opinion and Political Attitudes Credits: 3
- POLS 329 - Political Learning Credits: 3
- POLS 333 - The Political Film Credits: 3
- POLS 360 - Parties and Elections Credits: 3
- POLS 375 - Women and Politics Credits: 3


## Political Theory \& Thought:

- POLS 105 - Introducation to Political Theory Credits: 3
- POLS 341 - Classical Political Thought Credits: 3
- POLS 343 - Modern Political Thought Credits: 3
- POLS 345 - Contemporary Political Thought Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3


## International Relations \& Politics:

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Comparative Politics:

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3


## Public Policy \& Law:

- POLS 202 - Politics of Law Enforcement Credits: 3
- POLS 224 - Civil Liberties Credits: 3
- POLS 253 - Administrative Law Credits: 3
- POLS 255 - Introduction to Public Policy Credits: 3
- POLS 324 - Environmental Law and Policy Credits: 3
- POLS 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- POLS 348 - The Holocaust: Genocide and Political Violence Credits: 3
- POLS 359 - Policy Analysis and Evaluation Credits: 3
- POLS 403 - Constitutional Law Credits: 3


## Public Administration and Service:

- POLS 111 - Grassroots Democracy Credits: 3
- POLS 151 - Introduction to Public Administration Credits: 3
- POLS 232 - Nonprofit Management Credits: 3
- POLS 280 - Community Development Credits: 3
- POLS 305 - Ethical Practice in Public Administration Credits: 3
- POLS 311 - Quantitative Techniques Credits: 3
- POLS 330 - Managing Community Resources Credits: 3
- POLS 353 - Resource Development and Grant Writing Credits: 3
- POLS 455 - The Politics of National Service and Civil Society Credits: 3


## Degree Completion in Four Years Political Science (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HIST 153 - Twentieth Century World Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PE 149 - Tennis Credits: 1
- PHIL 101 - Introduction to Philosophy Credits: 3
- POLS 101-American National Government Credits: 3
- POLS 103 - International Relations Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3
- THEA 141 - Introduction to the Theatre Credits: 3

Sophomore Year - Total Hours: 30

- COMM 200 - Public Speaking Credits: 3
- EGEO 100 - Environmental Geology Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- G\&ES 105 - World Regional Geography Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- POLS 105 - Introducation to Political Theory Credits: 3
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3


## Junior Year - Total Hours: 31

- Electives - Credits: 12
- BIOL 101 - General Biology Credits: 3 + Lab
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- PHIL 331 - Social and Political Philosophy Credits: 3
- POLS 310 - Research Methods Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3


## Senior Year - Total Hours: 30

- Electives - Credits: 12
- POLS 450 - Credits: 6
- POLS 343 - Modern Political Thought Credits: 3
- POLS 348 - The Holocaust: Genocide and Political Violence Credits: 3
- POLS 367-National and International Security: Problems and Issues Credits: 3
- POLS 403 - Constitutional Law Credits: 3


## School of Business

110 Eisenberg Building
724-738-4865

## Chair

David Culp
Assistant Chair
John Misner

## Secretaries

Chris Byrd, Cathy Howryla

## Faculty

Abbass Alkhafaji, John Bavaro, Anindya Chatterjee, David Culp, Diane Galbraith, Olumide Ijose, Albena Iossifova, Joseph Lisciandro, Royce Lorentz, Susan Lubinski, Abbas Mamoozadeh, Larry McCarthy, John Misner, Abbas Noorbakhsh, Bruce Orvis, Frederick Tannery, Donald Tompkins, Jesus Valencia, Theresa Wajda, Lori Zulauf

Slippery Rock University's School of Business, as part of the College of Business, Information, and Social Sciences, exists to serve students interested in business careers and to equip them with the necessary knowledge and skills to become the business leaders of tomorrow. The School of Business offers the Bachelor of Science in Business Administration (BSBA) degree in eight majors: accounting, economics, finance, health services management, human resource management, international business, management, and marketing. Students in all seven majors complete a core of business courses designed to provide them with a solid foundation in the main functional areas of business.

Slippery Rock University, through the College of Business, Information and Social Sciences, and the School of Business, is accredited by the Association of Collegiate Business Schools and Programs (ACBSP). ACBSP is a leading
accreditation association for business education. The programs of study at accredited schools have been examined for currency, relevance, comprehensiveness and rigor. The credentials of the faculty teaching at accredited schools have been examined for preparation and professional development currency and relevance. Students attending Slippery Rock University's ACBSP accredited School of Business can expect programs of study that will prepare them well for the challenges of a career in business in an environment that enhances student learning.

Graduation requirements for all students pursuing the BSBA degree include a minimum 2.000 quality point average in courses designated as the BSBA core, a minimum 2.000 quality point average in courses constituting the major field of study (accounting, economics, finance, health services management, human resource management, international business, management, and marketing), and a minimum 2.000 quality point average in all coursework taken at Slippery Rock University. Transfer students must earn at least 30 credits in business courses at Slippery Rock University in order to be eligible for the degree. (Twelve of these credits must apply to the students' major in the degree.)

All students must complete at least 48 hours of upper division courses for graduation.

## BSBA Course Requirements (42 credits)

Note: For detailed course information see the Course Descriptions section of this catalog or the program of interest.
Required BSBA Core Courses ( $\mathbf{3 6}$ credits): ACCT 209, ACCT 210, ACCT 240, ECON 201, ECON 202, ECON or MGMT 219, FIN 320, MGMT 251, MRKT 230, MGMT 320, MGMT 365, MGMT 458.

Required Non-Business Courses ( $\mathbf{6}$ credits): CPSC 210, MATH 120 or higher (excluding MATH 152, MATH 210 and MATH 214).

In addition to the business core, students are required to complete courses in their chosen major (accounting: 24 credits; economics: 15 credits; finance: 18 credits; international business: 15 credits; health services management: 21 credits; human resource management: 18 credits; management: 18 credits, and marketing: 18 credits.)

## Requirements for Minor in Business Administration (for students who are not pursuing a BSBA degree)

 Required Courses ( 24 credits): ACCT 205 or ACCT 209, ECON 201 or ECON 202, MGMT 250 or MGMT 251, MRKT 230, and twelve additional credits selected from the 200-, 300 -, or 400 -level courses in any business discipline. At least six credits must be courses at the 300 or 400 level.Students pursuing a minor in business administration must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Accounting (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in accounting. The program in accounting at Slippery Rock University serves to develop its majors into professional accountants who can function effectively in public accounting, government, and industry. The curriculum focuses on the development of the student's business and accounting knowledge as well as key communication and computing skills. Emphasis is placed on passing the professional certification examinations (CPA, CMA, CFM, and CIA). Student professional growth is encouraged and enhanced through participation in the student chapter of the Institute of Management Accountants and through participation in the internship program in the School of Business.

A certificate in accounting program provides the opportunity for individuals with or without a baccalaureate degree to advance their employment potential by developing expertise and technical skills in the challenging and rewarding field of accounting. The accounting major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 66

Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Accounting Major - Credits: 24

- ACCT 230-Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309 - Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3
- ACCT 412 - Accounting Seminar Credits: 3
- ACCT 413 - Advanced Accounting I Credits: 3

Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Degree Completion in Four Years Accounting (BSBA)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 9
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MRKT 230 - Principles of Marketing Credits: 3

Junior Year - Total Hours: 30

- Accounting Elective - Credits: 3
- Liberal Studies Elective - Credits: 6
- ACCT 230-Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309 - Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 251-Organizational Behavior Credits: 3

Senior Year - Total Hours: 30

- Liberal Studies Elective - Credits: 12
- ACCT 411 - Auditing Theory and Practice Credits: 3
- ACCT 412 - Accounting Seminar Credits: 3
- ACCT 413 - Advanced Accounting I Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Certificate in Accounting

The certificate in accounting program provides the opportunity for individuals with or without a baccalaureate degree to advance their employment potential by developing expertise and technical skills in the challenging and rewarding
field of accounting. The accounting major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Certificate in Accounting

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 230-Accounting Information Systems Credits: 3 or
- ACCT 240 - Legal Environment or Business I Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309- Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3


## Certificate in Personal Financial Planning

## Requirements for the Certificate - Credits: 18

The following 18 credit hours must be successfully completed (2.0 QPA in program and 2.0 QPA in all SRU coursework) to earn this certificate.

- ACCT 308 - Federal Individual Income Tax Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 329 - Principles of Insurance Credits: 3
- FIN 409 - Retirement and Estate Planning Credits: 3
- FIN 410 - Personal Financial Planning Seminar Credits: 3
- FIN 421 - Portfolio Theory Credits: 3


## Economics (BS)

The program of economics offers a bachelor of science degree and a bachelor of science in business administration with a major in economics. Economics studies how markets allocate resources to promote our material well-being. It helps students develop a framework for understanding how events affect different markets for goods and services and how the aggregate functioning of the markets determine output, employment and prices. Students are also able to evaluate government policies designed to stabilize the economy, redistribute income, regulate industries and foster international trade.

Economics majors are encouraged to join both Omicron Delta Epsilon, an international honor society in economics, and the Economics, Finance and International Business Club. Both sponsor a variety of professional and social activities which allow students to enhance their out-of-classroom experience, develop a sense of professional common bond and group support among themselves and create a network with off-campus professionals.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, and manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Economics offers a broader view of the economy than other business related majors. The emphasis is on developing logical thinking, which aids in decision making and problem solving skills. Graduates are well prepared for careers in the public and private sector and receive an excellent background for furthering their education at graduate or professional schools. The economics major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 36

Basic Major Requirements - Credits: 30

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219

Plus 15 Credits of Economic Elective Courses

At the 300 level or higher and /or including:

- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 453-Collective Bargaining Credits: 3


## Math Requirement - Credits: 3

- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 210 and MATH 214)


## Skill Requirements - Credits: 3

- CPSC 210 - Productivity Software Credits: 3


## Degree Completion in Four Years Economics (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies Elective - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies Elective - Credits: 18
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- MGMT 251 - Organizational Behavior Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies Elective - Credits: 18
- Economics Elective - Credits: 6
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## Senior Year - Total Hours: 30

- Economics Elective - Credits: 9
- Liberal Studies Electives - Credits: 21
- ACCT 313 - Intermediate Accounting I Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Economics (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in economics. The program of economics offers a bachelor of science degree and a bachelor of science in business administration with a major in economics. Economics studies how markets allocate resources to promote our material well-being. It helps students develop a framework for understanding how events affect different markets for goods and services and how the aggregate functioning of the markets determine output, employment and prices. Students are also able to evaluate government policies designed to stabilize the economy, redistribute income, regulate industries and foster international trade.

Economics majors are encouraged to join both Omicron Delta Epsilon, an international honor society in economics, and the Economics, Finance and International Business Club. Both sponsor a variety of professional and social activities which allow students to enhance their out-of-classroom experience, develop a sense of professional common bond and group support among themselves and create a network with off-campus professionals.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, and manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Economics offers a broader view of the economy than other business related majors. The emphasis is on developing logical thinking, which aids in decision making and problem solving skills. Graduates are well prepared for careers in the public and private sector and receive an excellent background for furthering their education at graduate or
professional schools. The economics major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 57

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 15

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3

And 3 Elective Courses

Elective courses are selected from any 300-400 level economic courses excluding internship.

## Education - Economics Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in social studies with an emphasis in economics are available from the Department of Economics or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes
now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building 105.

## Finance (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in finance. Finance teaches students about the financial operations and financial management of firms. Students learn about the financial records of firms, the character and appraisal of corporate securities, and financial techniques used in all phases of the discipline. In addition, students may choose elective subjects which permit them to aim at a particular segment of finance, such as corporate finance, commercial and investment banking, and financial planning. Certain courses are offered each semester; others are cycled every other semester or every other year to provide the greatest diversification possible.

Finance majors are encouraged to join both the Financial Management Association, an international honor society in finance, and the Economics, Finance, and International Business Club. These organizations sponsor a variety of professional and social activities for students such as informal gatherings among students, invited speakers, tours and travel.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Finance majors are particularly well suited for positions in the private or public sector that require knowledge of financial institutions and financial operations such as banks, insurance companies and real estate firms. Students are also well prepared for graduate and professional schools. The finance major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 60

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Required Non-Business Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3

Two Elective Courses - Credits: 6

Elective Courses are Selected from Other 300- and 400-Level Finance Courses

## Degree Completion in Four Years Finance (BSBA)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies Elective - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Electives - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- MGMT 251 - Organizational Behavior Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies Electives - Credits: 12
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Senior Year - Total Hours: 30

- Liberal Studies Electives - Credits: 15
- Finance Electives - Credits: 6
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Health Services Management (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in health services management. The health services management program prepares traditional and non-traditional students to assume decision-making positions within a dynamic health care environment. It accomplishes this by providing a comprehensive and current curriculum in health management. This program maintains high standards and membership in the Association of University Programs in Health Administration.

Coursework, structured extracurricular learning experiences and an internship provide an excellent foundation in this area. Students are prepared to assume a variety of positions within the health care field and are also prepared to enter highly selective graduate and professional programs.

Health services management students have pursued a variety of positions within health care systems and health-related organizations. These positions represent a broad spectrum of health care systems including hospitals, nursing homes, managed care plans, group practices, health insurance companies, pharmaceutical companies, technology firms, medical supply companies, adult day care centers, senior citizen centers, rehabilitation centers, primary care centers, retirement villages and medical centers.

Students participate in the student chapter of the American College of Health Care Executives and attend the Annual Congress of the American College of Health Care Executives held in Chicago, Illinois. Field trips include the Hospital Council of Western Pennsylvania, Hamot Medical Center, Health Policy Institute of the University of Pittsburgh, and numerous others.

Health services administration students participate in a 12-week administrative internship during the summer of their junior year or the summer of their senior year. This internship provides the linkage between the knowledge obtained throughout the curriculum and the knowledge required in the field. SRU students have been given excellent recommendations for graduate programs and employment following internships. Additionally, many students have been offered employment as a result of their excellent performance during the internship.

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Required Non-Business Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

## Internship Required

A 12-week summer internship is required as a capstone experience prior to graduation. The internship provides opportunities to obtain practical experience, to network, and to identify potential employment opportunities.

Students are encouraged to maintain active membership in the SRU student chapter and the national chapter of the American College of Healthcare Executives and other professional associations based upon special interests. Invaluable opportunities exist within the organizations and they assist with socializing students into the profession and serve as an excellent opportunity to network with administrators in the field.

## Human Resource Management (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in human resource management. The human resource management major allows students to specialize in an area of business where the focus is on effectively managing employees or "human resources." Students are provided with an in-depth understanding of all areas of HR including labor relations, compensation, training, recruitment, employee safety, and employment law. Graduates are prepared for careers as an HR generalist or an HR specialist who focuses on one specific aspect of HR. The human resource management major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 63

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 9

- CPSC 210 - Productivity Software Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

- MGMT 354 - Human Resources Management Credits: 3
- MGMT 364 - Recruitment and Selection Credits: 3
- MGMT 451-Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3
- MGMT 460 - Training and Development Credits: 3


## Degree Completion in Four Year Human Resource Management (BSBA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- PESM Elective (2) - Credits: 2
- Math Requirement - Credits: 3
- LS/Elective - Credits: 10
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3

Sophomore Year - Total Hours: 30

- LS/Electives - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3


## Junior Year - Total Hours: 30

- LS/Elective - Credits: 12
- FIN 320 - Managerial Finance Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 451 - Employment Law Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Senior Year - Total Hours: 30

- LS/Elective - Credits: 15
- MGMT 364 - Recruitment and Selection Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455-Compensation Management Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MGMT 460 - Training and Development Credits: 3


## International Business (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in international business. This major combines the study of a foreign language and culture or the study of the political, legal and economic structures of different world regions with the business core through a set of courses especially tailored to the global marketplace. Students are well prepared for jobs in the private or public sector and would be particularly attractive candidates for employment in organizations with foreign operations.

International business is a very exciting and dynamic field with exceptional career opportunities. Majors in this program are strongly recommended to complete a minor in a supporting area such as finance or marketing. Many students also complete a modern language minor. This makes the international business major exceptionally employable with a diverse host of small and large firms in manufacturing, services, financial services, insurance, investment and commercial banks, and government agencies; all of which have a growing involvement with the international marketplace. A significant majority of our graduates find employment in their field of study or enter graduate programs. The international business major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## International Experience Requirement:

1. Study abroad with credits transferred back to SRU.
2. Taking an SRU course that is taught in whole or partially abroad.
3. Completion of an approved credit internship (domestic or foreign).
4. Completion of a pre-approved and documented international experience. Hours Supporting Courses (12 credits) which can be applied towards Liberal Studies.
Minor Area of Study:
All students are required to choose a minor area of study from the following list:

## College of Business, Information, and Social Science

Economics*, Finance*, Marketing*, Management*, Human Resource Management*, Accounting*, Communication*, Computer Science*, Information Systems*, Information Technology*, Political Science*, International Affairs, East Asian Studies

College of Humanities, Fine and Performing Arts
Modern Languages and Cultures - French*, Spanish*, German, Russian, History*, American History, European History, Non-Western History; English, Writing, Philosphy

College of Health, Environment and Science
Mathematics*, Statistics, Geography*
*Student may choose a second major in these areas if desired

## Requirements for the Major - Credits: 57

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 15

- INBS 227 - Introduction to International Business Credits: 3
- INBS 326 - International Economics Credits: 3
- INBS 427 - International Financial Management Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 437 - International Marketing Credits: 3


## International Experience Requirement:

1. Study abroad with credits transferred back to SRU.
2. Taking an SRU course that is taught in whole or partially abroad.
3. Completion of an approved credit internship (domestic or foreign).
4. Completion of a pre-approved and documented international experience. Hours Supporting Courses (12 credits) which can be applied towards Liberal Studies.

## Minor Area of Study:

## All students are required to choose a minor area of study from the following list:

## College of Business, Information, and Social Science

Economics*, Finance*, Marketing*, Management*, Human Resource Management*, Accounting*, Communication*, Computer Science*, Information Systems*, Information Technology*, Political Science*, International Affairs, East Asian Studies

## College of Humanities, Fine and Performing Arts

Modern Languages and Cultures - French*, Spanish*, German, Russian, History*, American History, European
History, Non-Western History; English, Writing, Philosphy
College of Health, Environment and Science
Mathematics*, Statistics, Geography*
*Student may choose a second major in these areas if desired

## Degree Completion in Four Years International Business (BSBA)

## Completion Hours: 120

Freshman Year - Total Hours: 32

- Math Requirement - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- INBS 227 - Introduction to International Business Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1 and Activity


## Sophomore Year - Total Hours: 30

- INBS Elective - Credits: 3
- Liberal Studies - Credits: 3
- ACCT 209 - Fundamental Accounting I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- COMM 217 - Intercultural Communication Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- POLS 263 - Introduction to Comparative Politics Credits: 3


## Junior Year - Total Hours: 28

- INBS Elective - Credits: 3
- Liberal Studies - Credits: 4
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240-Legal Environment or Business I Credits: 3
- INBS 326 - International Economics Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Senior Year - Total Hours: 30

- Minor - Credits: 9
- Liberal Studies - Credits: 9
- INBS 427 - International Financial Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Management (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in management. The program of management offers the bachelor of science in business administration degree with a major in management. This program focuses on the process of working with and through others to achieve organizational objectives. Today's manager must effectively plan, organize, lead and make decisions in an increasingly complex, changing environment.

The management students learn to make decisions regarding production, personnel, and overall strategy within the organization, considering the need to be responsive to growing societal demands, international competition and the multicultural nature of today's work force. The program is relevant to students who plan to own, manage, or consult for any organization, large or small, public or private, profit or nonprofit. The management major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 60

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

Three credits from any 300- or 400-level management course(s) except MGMT 450 and the following:

- MGMT 352 - Operations Management II Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 360 - Total Quality Management Credits: 3
- MGMT 454 - Management Seminar Credits: 3
- MGMT 457 - International Management Credits: 3


## Degree Completion in Four Years Management (BS/BA)

Completion Hours: 120

## Freshman Year - Total Hours: 32

- PESM Elective (2) - Credits: 2
- LS/Elective - Credits: 15
- Math Requirement - Credits: 3
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- LS/Elective - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Junior Year - Total Hours: 30

- LS/Elective - Credits: 12
- ACCT 240 - Legal Environment or Business I Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 360-Total Quality Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3


## Senior Year - Total Hours: 28

- Management Elective - Credits: 3
- LS/Elective - Credits: 13
- MGMT 352 - Operations Management II Credits: 3
- MGMT 454 - Management Seminar Credits: 3
- MGMT 457 - International Management Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Marketing (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in marketing. The study of marketing involves the dynamic process by which persons and organizations strive to anticipate and satisfy consumers' needs and wants. In a free enterprise system, this is accomplished through marketing research, product planning, pricing, promotion, and distribution.

The marketing student develops an understanding of the concepts, functions and institutions of marketing, an appreciation of the consumer orientation, the skills to analyze and the ability to formulate marketing policies. The marketing major is particularly relevant to the student planning a career in sales, advertising, consumer relations, merchandising, brand management, marketing management, marketing research, retailing services, purchasing, business logistics, small business operations, executive management, consulting, business education, or employment in certain government agencies as well as many non-profit organizations. The marketing major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 60

Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Marketing Major Courses - Credits: 18

- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- MRKT 431 - Marketing Seminar Credits: 3
- MRKT 437 - International Marketing Credits: 3

Three Credits Selected From Any 300- and 400-Level Marketing Courses Except MRKT 450 Internship

## Degree Completion in Four Years Marketing (BSBA)

Completion Hours: 120
Freshman Year - Total Hours: 32

- PESM Elective (2) - Credits: 2
- Math Requirement - Credits: 3
- Liberal Studies - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- LS/Elective - Credits: 9
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Junior Year - Total Hours: 30

- LS/Elective - Credits: 9
- ACCT 240 - Legal Environment or Business I Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 430 - Marketing Research Credits: 3

Senior Year - Total Hours: 28

- Marketing Elective - Credits: 3
- LS/Elective - Credits: 13
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 431 - Marketing Seminar Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Minor in Accounting

## Required BSBA Core Courses - Credits: 36

- ACCT 309 - Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3


## And One of the Following Courses:

- ACCT 230 - Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 310-Cost Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3


## Minor in Economics

Students pursuing a minor in economics must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3

And Two 300 or 400 Level Economics Courses

## Minor in Economics (non-BSBA)

Students pursuing a minor in economics must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required Courses - Credits: 15

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3

Specified Electives - Credits: 6

Two additional economic elective courses ( 200 level or above).

## Minor in Finance (Non-Business majors and Non-Information Science-Finance majors)

Requirements for the Minor

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3


## Minor in Finance for International Business (BSBA)

## Required BSBA Core Courses - Credits: 36

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 427 - International Financial Management Credits: 3

And One Finance Course 300- or 400-Level Or:

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## Minor in Human Resource Management (BSBA)

Students pursuing a minor in human resource management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- MGMT 354 - Human Resources Management Credits: 3

Plus Three of the Four Following Courses:

- MGMT 451 - Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3


## Minor in Human Resource Management (non-BSBA)

Students pursuing a minor in human resource management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 24

- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251-Organizational Behavior Credits: 3
- MGMT 354 - Human Resources Management Credits: 3

Management Electives - Credits: 12
(Choose four courses):

- HSAF 118 - Introduction to Safety Credits: 3
- MGMT 451-Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3
- MGMT 460 - Training and Development Credits: 3


## Elective Business Courses - Credits: 6

(Choose two courses):

- ACCT 205-Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
or
- HSAF 118 - Introduction to Safety Credits: 3
- MGMT 219 - Business Statistics Credits: 3

Two Courses at the 300-Level or Above Except:

- MGMT 450 Internship, MRKT 230


## Minor in International Business

Students pursuing a minor in international business must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- INBS 227 - Introduction to International Business Credits: 3

And Three of the Following:

- INBS 326 - International Economics Credits: 3
- INBS 427 - International Financial Management Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Minor in Management (BSBA)

## Required BSBA Core Courses - Credits: 36

- MGMT 352 - Operations Management II Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 457 - International Management Credits: 3

One of any 300- or 400-Level Management Courses - Credits: 12

## Minor in Management (non-BSBA)

Students pursuing a minor in management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 24

- MGMT 250 - Principles of Management Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3


## Management Elective Courses - Credits: 15

(Choose five courses): Any 300 or 400 level management course except MGMT 450

## Elective Business Courses - Credits: 6

(Choose two courses):

- ACCT 205-Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3 (not both)
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
or
- ECON 202 - Principles of Microeconomics Credits: 3 (not both)
- ECON 219 - Business Statistics Credits: 3
or
- MGMT 219 - Business Statistics Credits: 3 (not both)


## Minor in Marketing (BSBA)

Students pursuing a minor in marketing must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 437 - International Marketing Credits: 3

And One of Any 300- or 400-Level Marketing Courses - Credits: 12

## Minor in Marketing: (non-BSBA)

Students pursuing a minor in marketing must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Requirements for the Minor - Credits: 24

- MRKT 230 - Principles of Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Marketing Elective Courses - Credits: 9

(Choose Three Courses): Any 300 or 400 Level Management Course Except MRKT 450.

Elective Business Courses - Credits: 6

## (Choose two courses):

- ACCT 205-Accounting for Decision Makers Credits: 3 or
- ACCT 209 - Fundamental Accounting I Credits: 3 (not both)
- ACCT 240 - Legal Environment or Business I Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or
- ECON 202 - Principles of Microeconomics Credits: 3 (not both)
- ECON 219 - Business Statistics Credits: 3
or
- MGMT 219 - Business Statistics Credits: 3 (not both)
- MGMT 250 - Principles of Management Credits: 3 or
- MGMT 251 - Organizational Behavior Credits: 3 (not both)

Two MRKT Courses at the 300-level or Above Except MRKT 450.

## Sociology/Anthropology/Social Work

004 Spotts World Culture Building<br>724-738-2084<br>Chair<br>Esther Skirboll

## Secretary

Debra Moors

## Faculty

Alana Atchinson, Thomas Bechard, Kundan Bhatia, David Champion, Katherine Hardesty, Herman Jones, Ahmad Khalili, Srinivasa Mani, Esther Skirboll, Michael Stowe

## Education - Sociology/Anthropology Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in social studies with an emphasis in sociology/anthropology are available in the Department of Sociology, Anthropology and Social Work or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building 105.

## Minor in Anthropology

Requirements for the Minor in Anthropology - Credits: 18

- SASW 202 - Introduction to Anthropology Credits: 3
- SASW 211 - Physical Anthropology Credits: 3
- SASW 212 - Archaeology/World Prehistory Credits: 3
- SASW 320 - Anthropology Methods Credits: 3
- SASW 401 - Applied Anthropology Credits: 3

And One of the Following:

- G\&ES 303 - Asia Credits: 3
- G\&ES 308 - Europe Credits: 3
- G\&ES 309 - Africa Credits: 3
- SASW 310-Cultural Area Studies Credits: 3


## Minor in Criminology

Requirements for the Minor - Credits: 21
Required Courses - Credits: 18

- SASW 201 - Principles of Sociology Credits: 3
- SASW 273 - American Corrections Credits: 3
- SASW 323 - Deviant Behavior Credits: 3
- SASW 333 - Crime, Justice and Society Credits: 3
- SASW 345 - Juvenile Delinquency Credits: 3
- SASW 414 - Law and Social Policy Credits: 3


## Electives

(One of the following courses):

- PHIL 335 - Philosophy of Law and Justice Credits: 3
- POLS 202 - Politics of Law Enforcement Credits: 3
- POLS 323 - The Courts Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3 or PSYC 202 Psychology of Criminal Behavior - Credits: 3


## Minor in General Sociology

## Requirements for the Minor - Credits: 18

Core Courses - Credits: 9

- SASW 201 - Principles of Sociology Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3

Electives - Credits: 9

Three Approved Courses from Among Sociology Offerings.

## Social Work (BS)

Requirements for the Major - Credits: 54-57
Required Courses - Credits: 9

Liberal Arts Base

- POLS 101 - American National Government Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3
- SASW 201 - Principles of Sociology Credits: 3

Core Courses - Credits: 30

- SASW 105 - Human Diversity Credits: 3
- SASW 250-Social Welfare Institutions Credits: 3
- SASW 251 - Introduction to Social Work Credits: 3
- SASW 328 - Human Behavior and the Social Environment I Credits: 3
- SASW 329 - Human Behavior and the Social Environment II Credits: 3
- SASW 355 - Social Work Methods I Credits: 3
- SASW 356 - Social Work Methods II Credits: 3
- SASW 357 - Social Work Methods III Credits: 3
- SASW 407 - Social Policy Issues Credits: 3

Research Methodology - Credits: 6

- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3

Internships - Credits: 9-12

A 405-to 540-hour supervised placement in selected professional agencies.

- SASW 450 - SASW Internship Credits: 3 to 15 A 405-to 540-hour supervised placement in selected professional agencies.


## Degree Completion in Four Years Social Work (BS)

Completion Hours: 120
Freshman Year - Total Hours: 29

- PE - Credits: 2
- Liberal Studies - Credits: 3
- Free Elective - Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 or higher
- POLS 101 - American National Government Credits: 3 (National Experience)
- PSYC 105 - Introduction to Psychology Credits: 3 (Hum Institution)
- SASW 105 - Human Diversity Credits: 3
- SASW 201 - Principles of Sociology Credits: 3


## Sophomore Year - Total Hours: 33

- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- SASW 250 - Social Welfare Institutions Credits: 3
- SASW 251 - Introduction to Social Work Credits: 3
- SASW 328 - Human Behavior and the Social Environment I Credits: 3
- SASW 329 - Human Behavior and the Social Environment II Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies - Credits: 3
- Liberal Studies - Credits: 9
- Free Elective - Credits:9
- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 355 - Social Work Methods I Credits: 3

Senior Year - Total Hours: 25-28

- Liberal Studies - Credits: 4
- SASW 356-Social Work Methods II Credits: 3
- SASW 357 - Social Work Methods III Credits: 3
- SASW 407 - Social Policy Issues Credits: 3
- SASW 450 - SASW Internship Credits: 3 to 15
- SASW 460 - Senior Synthesis Credits: 3


## Sociology-Anthropology

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.

The sociology program offers three tracks: sociology-general, sociology-criminology, and sociology-anthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good preparation for professional positions requiring knowledge of society and human behavior such as law, personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and evolution of human beings and their culture, providing students with an opportunity to look at humans in their infinite biological and cultural varieties.

## Requirements for the Major - Credits: 33

Core Courses - Credits: 12

- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3


## Required Courses in Anthropology Electives - Credits: 15

- SASW 211 - Physical Anthropology Credits: 3
- SASW 212 - Archaeology/World Prehistory Credits: 3
- SASW 310-Cultural Area Studies Credits: 3
- SASW 320-Anthropology Methods Credits: 3
- SASW 401 - Applied Anthropology Credits: 3

Electives - Credits: 6

From the following:

- SASW 395
- SASW 226 - Population and Society Credits: 3
- SASW 309 - Health and Society Credits: 3
- SASW 312 - Archaeology Techniques and Laboratory Credits: 3
- SASW 322 - Aztecs, Incas and Maya Credits: 3
- SASW 324 - The Family Credits: 3
- SASW 327 - Religion and Society Credits: 3
- SASW 339 - Sex Roles and Society Credits: 3
- SASW 450 - SASW Internship Credits: 3 to 15


## Degree Completion in Four Years Sociology-Anthropology (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 18
- PE - Credits: 2
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3

Sophomore Year - Total Hours: 30

- SASW Elective - Credits: 3
- MOD LANG 101 - Credits: 3
- MOD LANG 102 - Credits: 3
- Liberal Studies - Credits: 15
- COMM 200 - Public Speaking Credits: 3
- SASW 211 - Physical Anthropology Credits: 3


## Junior Year - Total Hours: 30

- MOD LANG 103 - Credits: 3
- Liberal Studies - Credits: 9
- Free Electives - Credits: 6
- SASW 212 - Archaeology/World Prehistory Credits: 3
- SASW 310-Cultural Area Studies Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 320-Anthropology Methods Credits: 3


## Senior Year - Total Hours: 28

- SASW Electives - Credits: 6
- Free Electives - Credits: 4-13 or SASW 450 (optional) 3-12
- SASW 401 - Applied Anthropology Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3
- SASW 450 - SASW Internship Credits: 3 to 15


## Sociology-Criminology (BA)

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.

The sociology program offers three tracks: sociology-general, sociology-criminology, and sociology-anthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good preparation for professional positions requiring knowledge of society and human behavior such as law, personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and
evolution of human beings and their culture, providing students with an opportunity to look at humans in their infinite biological and cultural varieties.

## Requirements for the Major - Credits: 36

Core Courses - Credits: 24

- SASW 205
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3
- SASW 304 - Urban Sociology Credits: 3
- SASW 317- Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 348 - Sociology of Organizations Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3

Electives - Credits: 12

Three courses from the following:

- SASW 273 - American Corrections Credits: 3
- SASW 323 - Deviant Behavior Credits: 3
- SASW 333 - Crime, Justice and Society Credits: 3
- SASW 343-Criminal Investigations Credits: 3
- SASW 345 - Juvenile Delinquency Credits: 3
- SASW 360 - Police and Society Credits: 3
- SASW 404 - Adjudication in Crime and Justice Credits: 3
- SASW 414 - Law and Social Policy Credits: 3

One course from the following:

- PSYC 202
- PHIL 335 - Philosophy of Law and Justice Credits: 3
- POLS 202 - Politics of Law Enforcement Credits: 3
- PSYC 302 - Psychology of Criminal Behavior Credits: 3

Internship - Credits: 9
optional

## Degree Completion in Four Years Sociology-Criminology (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- Liberal Studies - Credits: 15
- PE - Credits: 2
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3


## Sophomore Year - Total Hours: 30

- SASW Elective \#1-Credits: 3
- MOD LANG 101 - Credits: 3
- MOD LANG 102 - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- SASW 205 - Credits: 3
- COMM 200 - Public Speaking Credits: 3
- SASW 304 - Urban Sociology Credits: 3

Junior Year - Total Hours: 30

- SASW Elective \#2 - Credits: 3
- MOD LANG 103 - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 348 - Sociology of Organizations Credits: 3

Senior Year - Total Hours: 25-34

- SASW Elective \#3 - Credits: 3
- SASW Elective \#4 - Credits: 3
- Free Electives or Internship - Credits: 9
- Liberal Studies - Credits: 9
- Free Electives - Credits: 7
- SASW 412 - Basic Sociological Theory Credits: 3
- SASW 450 - SASW Internship Credits: 3 to 15 (optional)


## Sociology-General (BA)

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.

The sociology program offers three tracks: sociology-general, sociology-criminology, and sociology-anthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good preparation for professional positions requiring knowledge of society and human behavior such as law, personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and evolution of human beings and their culture, providing students with an opportunity to look at humans in their infinite biological and cultural varieties.

## Requirements for the Major - Credits: 30-39

Core Courses - Credits: 21

- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3
- SASW 304 - Urban Sociology Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 348 - Sociology of Organizations Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3


## Electives - Credits: 9

Three elective courses from within the department with advisor approval

Internship - Credits: 6-9
optional

## Degree Completion in Four Years Sociology - General (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- Liberal Studies - Credits: 15
- PE- Credits: 2
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3

Sophomore Year - Total Hours: 30

- SASW Elective \#1-Credits: 3
- MOD LANG 101 - Credits: 3
- MOD LANG 102 - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- COMM 200 - Public Speaking Credits: 3
- SASW 304 - Urban Sociology Credits: 3


## Junior Year - Total Hours: 30

- SASW Elective \#2 - Credits: 3
- MOD LANG 103 - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 348-Sociology of Organizations Credits: 3

Senior Year - Total Hours: 31

- SASW Elective \#3 - Credits: 3
- Free Electives or Internship - Credits: 9
- Liberal Studies - Credits: 3
- Free Electives - Credits: 13
- SASW 412 - Basic Sociological Theory Credits: 3


## College of Education

105 McKay Education Building
724-738-2007
Dean
C. Jay Hertzog

Assistant to the Dean
Herbert Hunt
Administrative Assistant
Dolores Daugherty

## Secretary

Michelle Houston
Informational Writer
Phyllis Kendziorski
Departments
Counseling and Educational Psychology
Elementary Education/Early Childhood Education
Physical Education
Secondary Education/Foundations of Education
Special Education
Sport Management

Slippery Rock University of Pennsylvania has been preparing teachers since 1889, when it began as a normal school and developed through the years as a state teachers college and state college. Now, as a unit within a multi-purpose university, the College of Education programs are the largest segment of the student population. The near ideal enrollment of the college, the student/professor ratio, and dedication of the faculty enable us to continually prepare "world-class" teachers. The College consists of the departments of counseling and educational psychology, elementary and early childhood education, physical education, secondary education and foundations of education, special education and sport management. In addition, school nurse and music education are majors that lead to teacher certification, but are offered through other colleges within the university. These major fields of study are described as programs according to each administering department. The guidelines included below apply to all department programs; additional, more specific guidelines are provided for each individual program.

## Teacher Education

The College of Education provides programs for the preparation of teachers for elementary and secondary schools. These programs are accredited by the National Council for the Accreditation of Teacher Education (NCATE), the respective learned societies for each program, the Middle States Association, and the Pennsylvania Department of Education. Additional certification programs (music education and school nurse) are offered in cooperation with the College of Humanities, Fine and Performing Arts and the College of Health, Environment and Science. However, within the College of Education is the certification officer for the University whose responsibility it is to review an individual's progress and recommend deserving candidates for teacher certification in Pennsylvania.

## Admission to Teacher Education

Although freshmen and transfer students may declare a major in education, students are not considered education majors until they have been admitted to the teacher education program. The following are the requirements for admission to the teacher education program: completion of 48 semester hours of credit including six credits of college level mathematics and six credits of English composition/literature; successful completion of the Praxis I examination (PPST). In addition, perspective students must have evidence of 40 contact hours with children, 20 hours of which must be in a school with at least $15 \%$ diversity (see advisor for clarification), and a 2.8 QPA. These criteria are established through the Pennsylvania Department of Education's Chapter 354. For additional requirements related to the admission to teacher education programs, students should consult the "Application for Admission to Teacher Education" form available in the Dean's Office, Room 105 McKay Education Building, or the College of Education homepage-www.sru.edu/pages/688.asp. In addition, students must present evidence of a clear (no record) Act 34 (criminal record) and Act 151 (child abuse). Out-of-state students are also subject to background checks. These record checks are good for one year only. Detailed requirements and policies are described in the Teacher Education Policy

## Request for Accommodations: Student Teaching with Disabilities

The university follows guidelines, including the Americans with Disabilities Act, in accommodating students with disabilities. Inquiries related to special needs must be made early in the program to the Office of Social Equity, especially for those who may apply for student teaching. To be recommended for certification, a candidate must demonstrate the ability to perform essential functions required of all beginning teachers.

## Student Teaching

A teacher candidate, having met or exceeded personal and program requirements at prescribed levels of competence, has earned the right to participate in student teaching. While student teaching, the teacher candidate experiences the comprehensive assessment of performance mandated in an approved certification program. The practical application of instruction and learning can be simulated in university classrooms, but not duplicated. A true test of relating theory into practice awaits each teacher candidate, assisted by a cooperating teacher and a university supervisor.

Pre-registration for this capstone experience, one year in advance, reserves the right of assignment for the qualified candidate. Completed cards, signed by their advisor, are filed in McKay Education Building (MEB), room 105. Qualified applicants anticipate successful completion of all program courses with a grade of "C" or higher for certification prior to student teaching. Also, a tuberculin test, 30 days prior to contact with school students, is required. In addition, students must present current evidence of a clear (no record) Act 34 (criminal record) and Act 151 (child abuse). Out-of-state students are also subject to background checks.

Actual registration for student teaching takes place early in the semester preceding the experience. Beginning with mandatory attendance at the student teaching orientation meeting, students are acquainted with policies and procedures including automated registration.

The university student teaching supervisors service a large geographical area. However, the area serviced in any particular semester varies according to candidate placements and supervisor availability. In the student teaching semester, candidates are responsible for their own housing and transportation to assignments in school districts and should realize that this will be an added expense to the cost of a university education. A student teaching handbook is provided at the beginning of the student teaching semester in the opening seminar. Additional policies and procedures are described in the Teacher Education Policy Manual, available in MEB 105 and on the College of Education homepage (www.sru.edu/depts/pages/688.asp).

## Placement of Student Teachers

Students are permitted to make several suggestions for districts, in close proximity to permanent or temporary residences, in which they may be assigned to student teach. These suggestions are non-binding to the university, but helpful as one variable in the assignment of student teaching sites. Transportation to the student teaching site is an individual's responsibility.

## Certification

awarded without recommendation for certification. A recommendation for the Instructional I (Provisional) certificate requires satisfactory completion of an approved program which includes a 16 week student teaching experience, while satisfying general graduation requirements, the required 3.0 QPA for certification and a passing score on the PRAXIS II examination. Seniors meeting all requirements will be provided with graduation application materials at the beginning of the semester in which they should graduate. Applications are received by the Office of Dean of Education during the first three weeks of the semester. Students failing to complete program requirements must reapply.

## Interstate Reciprocity

Although some states have not formally agreed to reciprocity, the Pennsylvania certificate has been honored by most states.

## Praxis Test Results

The following information is presented in accordance with the Title II Higher Education Act of 1998 and is a result of the most recent Praxis results (2004/2005). While the state of Pennsylvania mandates that candidates who are recommended for certification must have passing scores on the Praxis series; SRU, unlike some other teacher preparation institutions, does not withhold candidate graduation until Praxis tests are passed. However, all candidates must present evidence of having taken the Praxis II test for the area in which they will student teach. Those who do not pass the Praxis II prior to student teaching must show evidence that they are enrolled in a Praxis remediation program prior to the start of student teaching.

```
Area: Pass Rate SRU
State
```


## Basic Skills

```
Elementary Content Knowledge 100%
95%
PPST Reading
100%
100%
```

Academic Content Areas

```
Elem Ed Curr. Instruc. Assessment.94\%
93%
Early Childhood Educ.
*
English Lang. Lit. Comp. Cont Knowledge
*
Education of Exceptional Students 100%
100%
```


## Other Content Areas

* Fewer than 10 students took this test during the academic year, therefore, there is no report of their pass rate.


## Post-baccalaureate Studies

Individuals who have earned a baccalaureate degree from an accredited institution may qualify for initial certification or an endorsement to an existing teaching certificate by completing prescribed requirements in one or more of the approved undergraduate programs.

An application for a post-baccalaureate (post-bac) program must be submitted to the university's Undergraduate Admissions Office where the candidates' previous work is reviewed. Following this review, the candidate will be notified of his/her admission status. Work that is dated, especially in pedagogy, may not be accepted and the candidate may be required to retake such courses. Candidates accepted for admission as post-bac students will be informed of program requirements to be completed to obtain certification in the desired area. Admission to post-bac study requires a minimum undergraduate QPA (Quality Point Average) for admission. The current minimum QPA is listed among the requirements on the "Application to Teacher Certification" form available in 105 McKay Education Building or on the College of Education homepage: www.sru.edu/depts/pages/688.asp. Those who do not have the minimum QPA may apply for "conditional" admission provided they meet the requirement as set forth in the Teacher Education Policy Manual: www.sru.edu/pages/9655.asp. In addition to the QPA requirement, post-baccalaureate students must submit proof of clear (no record) Acts 34 (criminal record) and 151 (child abuse) for admission and maintain clear records throughout the program. Out-of-state students are also subject to background checks. These record checks are good for one year only. A field experience is required so the candidate's teaching ability may be observed and evaluated in the area for which initial certification or added endorsement is sought. In addition, post-baccalaureate students must post passing scores on the Praxis I exam during their first twelve credits of study.

Benefits of post-baccalaureate work include: earning an initial or additional certification, obtaining an additional degree, making a certificate permanent, or personal enrichment. At the start of the post-baccalaureate education, candidates must state their intention for their program. Those candidates pursuing an additional degree must earn a minimum of 30 credits beyond their initial baccalaureate degree. To add an additional major or minor to an existing baccalaureate degree requires earning an additional degree.

Admission to all programs is determined on a space available basis and some programs may not be open to admission. Candidates are encouraged to speak to the chair of the department in which the certificate they intend to pursue is housed to ascertain departmental admissions procedures.

## Counseling \& Development

006 McKay Education Building<br>724-738-2035

## Chair

Gerard Love

## Secretary

Kelly Noronha

## Faculty

Padma Anand, Julaine Field, Michael Ignelzi, Ann Kemmerer, Jered Kolbert, Gerard Love, Mary Russo, Melissa
Rychener, Donald Strano
Certification programs are available only at the graduate level and include a master of education program in elementary school counseling and in secondary school counseling. In addition, at the graduate level the department offers Master of Arts programs in community counseling, with specialization in addiction, child and adolescent, and adult counseling, and also offers a Master of Arts in Student Affairs in Higher Education. (For description of graduate programs see the Graduate Catalog.)

## Elementary Education/Early Childhood

## Chair

Lee Williams

## Assistant Chair

Robert Snyder

## Secretaries

Dixie Hogue, Angela Kay Wolford

## Faculty

Susan Argyle, Claudia Balach, Bernice Brown, Sean Colbert-Lewis, Kim Creasy, Carmine DeCarlo, Sherry DuPont, Thomas Gordon, Rose Heilman-Houser, Herbert Hunt, Geraldine Jenny, Nikki Merchant, Suzanne Rose, Anne Slanina, Robert Snyder, Pamela Soeder, Mary Vetere, Deborah Wells, Judy Werner, Lee Williams, Marilyn Yensick

The Department of Elementary Education/Early Childhood offers an undergraduate certification program in elementary education with the opportunity to add on certification in Early Childhood Education. Prospective elementary teachers take balanced course work that provides a broad educational experience. Included are liberal studies courses as well as both professional and elementary education courses. Students (in this certification area) are required to complete 40 contact hours with elementary children during the freshman and sophomore years. This early experience is followed by numerous field experiences in elementary classrooms as well as student teaching during the senior year. Students are offered the opportunity to complete part of their student teaching in an international or urban setting. The primary objective of the elementary education program is to develop competent, caring and effective state-of-the-art teachers.

## Complementary Competencies

In addition to the required courses for teacher preparation, students must demonstrate competencies in complementary areas. Students may complete these requirements by taking courses, through workshops or life experiences. Generally, competency areas are determined by accrediting agencies and state certification requirements. The goal of the complementary competencies is to provide knowledge and experiences, which contribute to the development of wellrounded classroom teachers. Details with regard to meeting these competencies are outlined on the guide sheet for elementary education majors.

## Multiple Certification Programs

While not required, it is strongly recommended that students complete a second area of certification, a minor, or an area of concentration in addition to elementary education. Our students have completed additional certifications in early childhood education, special education, environmental education and modern languages. Students have also minored in many areas including dance, history, math and Spanish. Students seeking multiple certifications should declare their intent as early as possible in their academic career and recognize that this may require additional credits beyond those required for the baccalaureate degree. Students seeking multiple certifications may expect to complete student teaching experiences in each of the certification areas. Specific requirements for additional certification, minors, and areas of concentration are available from advisors and the Department of Elementary Education office, room 104 McKay Education Building. Students are encouraged to work closely with their academic advisor in choosing and declaring these other options.

## Post-Baccalaureate Programs

Persons possessing a bachelor's degree may apply for admission to the post-baccalaureate program leading to elementary education certification. This program is designed for those who have completed degree requirements in a non-education major or who desire a second certification after graduation.

The post-baccalaureate program includes up to 80 credits of coursework and a required practicum. The practicum must be completed in an elementary classroom under the supervision of a university faculty member, even if the student is certified in another area.

## Elementary Education/Early Childhood Education (BSEd)

The specific course of study and the requirements leading to teacher certification administered by the Department of Elementary Education/Early Childhood Education are available in the departmental office, from the student's advisor, and from the Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

The guidelines on admission, professional conduct, and student teaching for this department are subject to change. Current requirements for the College of Education as a whole may be found in the Teacher Education Policy Manual.

## Track: Elementary School Teaching

## Degree Completion in Four Years Elementary Education Certification (BSEd)

Completion Hours: 120
Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 15
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 15
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- HSAF 205 - First Aid and Safety Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3 Required
- SEFE 200 - Introduction to Education Credits: 3

Junior Year - Total Hours: 30-31

- LS, Challenges of the Modern Ages - Credits: 3
- Free Elective - Credits: 1-2
- CDEV 342 - Educational Psychology Credits: 3
- ELEC 281-Cultural Awareness in the Elementary Classroom Credits: 3
- ELEC 288 - Children's Literature Credits: 3
- ELEC 301 - Math/Science Teaching Lab Credits: 1
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- ELEC 385 - Creativity in Elementary School Credits: 1 to 3
- PE 243 - Movement Education Credits: 2
or DANC 223
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3


## Senior Year - Total Hours: 27

- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 352 - The Teaching of Language Arts Credits: 3
- ELEC 372 - The Teaching of Elementary Social Studies Credits: 3
- ELEC 455 - Student Teaching: Elementary Education Credits: 12, 6, 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Track: Early Development and Learning (No Teacher Certification)

Students may elect to major in elementary education without working for a teaching certificate. The track, Early Learning and Development, prepares graduates for a variety of community-based roles working with young children. Students conclude the program with a 12 -credit internship within a local community-based facility.

## Degree Completion in Four Years Early Developement and Learning

## Completion Hours: 120

## Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 19
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 9
- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ELEC 281-Cultural Awareness in the Elementary Classroom Credits: 3
- ELEC 288 - Children's Literature Credits: 3
- SEFE 200 - Introduction to Education Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies - Credits: 9
- ELEC 317-Child and Family Development in Early Childhood Credits: 3
- ELEC 327 - Social/Cultural Studies in Early Childhood Education Credits: 3
- ELEC 337 - Emerging Literacy Credits: 3
- ELEC 347 - Modern Primary Programs Credits: 3
- ELEC 385-Creativity in Elementary School Credits: 1 to 3
- ELEC 407 - Math and Science in Early Childhood Learning Credits: 3
- HSAF 205 - First Aid and Safety Credits: 3

Senior Year - Total Hours: 28

- Free Elective - Credits: 2-3
- ELEC 427 - Early Intervention Credits: 3
- ELEC 437 - Assessment in Early Childhood Credits: 3
- ELEC 445 - Administration of Child Care Programs Credits: 3
- ELEC 447 - Early Childhood Field Experience Credits: 3
- ELEC 450 - Internship: Early Childhood Credits: 12
- PE 243 - Movement Education Credits: 2 or DANC 223


## Physical Education

109 Morrow Field House
724-738-2072

## Chair

Lynn Spadine Taylor

## Secretary

Sis Warcup

## Faculty

Kaduabu Ajongbah, Darlene Bullock, Victor Campagna, Istvan Kovacs, Joanne Leight, Wen Hao Liu, Betsy McKinley, Jeff Messer, Marybeth Miller, Randall Nichols, Robert Ogoreuc, Lou Slautterback, Jeff Smith, Lynn Spadine-Taylor, Jay Vasil, Traci Zillifro

The Department of Physical Education offers a major degree program in physical education. The traditional focus within the department is the teacher certification program that prepares students to teach both health and physical education in grades K-12.

Students are also encouraged to include an additional minor in one of the following: sport management, aquatics, coaching or dance. The total program is designed to provide a comprehensive knowledge base in health and physical education pedagogy.

# Health and Physical Education Certification (PostBaccalaureate Program) 

## Requirements

Persons possessing a bachelor's degree may apply for admission to the post- baccalaureate program leading to health and physical education certification. This program is designed for those who have completed degree requirements in a non-education major or who desire a second certification after graduation.

The post-baccalaureate program includes up to 96 credits of coursework, including a required student teaching experience.

## Physical Education: Teacher Education (BSEd)

## Requirements for the Bachelor of Science in Education


#### Abstract

The requirements leading to teacher certification in K-12 health and physical education parallel the accreditation standards and guidelines of the National Association of Sport and Physical Education and of the Pennsylvania Department of Education. The curriculum is designed to prepare future physical education teachers for the challenge of teaching K-12 students about the importance of physical activity and health.

The specific course of study and the requirements leading to teacher certification administered by the Department of Physical Education are available in the departmental office, from the student's advisor, online at www.sru.edu/pe, and from the Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

The guidelines on admission, professional conduct, and student teaching for this department are subject to change. Current requirements for the College of Education as a whole may be found in the Teacher Education Policy Manual.

\section*{Degree Completion in Four Years Physical Education: Teacher Education (BSEd)}


## Completion Hours: 120

## Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 6
- CDEV 248 - Human Development and Education Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
(P see footnotes)
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 Math 113 or Higher
- PE 107-Aquatic Fundamentals Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PE 152 - Practical Introduction to Teaching Physical Education Credits: 3
- PE 191 - Foundations of Physical Education Credits: 2
- PE 192 - Diversity Issues in Physical Education Credits: 2


## Sophomore Year - Total Hours: 33

- Liberal Studies - Credits: 9
- COMM 200 - Public Speaking Credits: 3 (P see footnotes)
- DANC 105 - Dance Fundamentals Credits: 1
- HSAF 262 - Health Foundations Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 MATH 113 or higher
- PE 106 - Gymnastics Fundamentals Credits: 3
- PE 202 - Technology for Physical Education Teacher Education Credits: 3
- PE 241 - Outdoor Pursuits Credits: 3
- PE 243 - Movement Education Credits: 2
- PE 274 - Assessment Strategies in Physical Education Credits: 3


## Junior Year - Total Hours: 29

- Liberal Studies - Credits: 3
- PE 357- Territory Activities \& Games (F) Credits: 3
- PE 359 Striking/Fielding Activites \& Games (S) Credits: 2
- ERS 370 - Anat. \& Phys. Bases of Phys. Act. Credits: 3 (A, W, F, S see footnotes)
- ERS 275 - Introduction to Adapted Physical Activity Credits: 3 (A see footnotes)
- HSAF 362 - Introduction to School Health Education Credits: 3
(A, P see footnotes)
- PE 242 - Fitness Education Credits: 3
(P see footnotes)
- PE 352 - Secondary Physical Education Teaching Methods Credits: 3
(A, P see footnotes)
- PE $356-\mathrm{Net} /$ Wall Activities and Games Credits: 3
- PE 359 - Striking/Fielding Activities and Games Credits: 2
- PE 383 - Motor Development and Learning Credits: 3
(A see footnotes)


## Senior Year - Total Hours: 26

- CDEV 342 - Educational Psychology Credits: 3
- HSAF 462 - Teaching and Assessment in Health Education Credits: 3 (A, P see footnotes)
- PE 358 - Lifetime/Leisure Activities and Games Credits: 3
- PE 452 - Elementary Physical Education Methods Credits: 3 (A, P see footnotes)
- PE 455 - Student Teaching - Physical Education Credits: 12 (A see footnotes)
- PE 468 - Senior Seminar in Physical and Health Education Teacher Education Credits: 2 (A, P see footnotes)


## Footnotes

$(\mathrm{P})=$ Prerequisite Required
$(A)=$ Acceptance to Teacher Certification Required
$(W)=$ Waiver from Liberal Studies Hours
$(S)=$ Offered Spring Semester Only
(F) $=$ Offered Fall Semester Only

# Secondary Education/Foundations of Education 

114 McKay Education Building

724-738-2041

## Chair

Edwin Christmann

## Secretary

Kay Castor

## Faculty

Richard Altenbaugh, John Badgett, Edwin Christmann, Leighann Forbes, Patsy Ann Johnson, Jeffrey Lehman, Mark Mraz, Caryn Pugliese, Junko Yamamoto

The mission of the department is to provide secondary education majors with the knowledge, skills, and dispositions required to succeed in today's changing classrooms. Moreover, the merging of theory with practice and the building of a solid background in foundations of education for all education majors are additional hallmarks.

Prospective secondary school teachers are required to take for certification, coursework in an academic discipline that is equivalent to a major in that discipline. Successful completion of a prescribed program and the PRAXIS series examinations are required for eligibility for certification by the Pennsylvania Department of Education.

A secondary education major is advised by a faculty member in the academic discipline and by one in the Department of Secondary Education/Foundations of Education. Students may choose to attain dual certification, that is, to become eligible to teach in more than one subject area. The decision to attempt this dual certification should be made as early as possible in order to facilitate scheduling. It is the responsibility of the students to understand the certification requirements and to schedule all required courses.

## Requirements for the Bachelor of Science in Education

The department uses both state and national guidelines to continually update its accredited programs. Therefore, the specific course of study and the most recent requirements leading to teacher certification in this department are
available in the departmental office or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage. Areas of teacher certification in secondary education at the baccalaureate level include:

English
French
Citizenship-History
Spanish
Areas of Teacher Certification in Secondary Education at the master's level:
Biology
Chemistry
Earth and Space Science
General Science
Mathematics
Physics
Certification in these latter areas is available only at the graduate level as part of the master of education degree program. For more information about this program, including prerequisites, contact the Secondary Education/Foundations of Education office in 114 McKay Education Building.

## Specialization-Social Studies-History (BS)

## Requirements for the Program

Two of the following world history courses:

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3


## Two of the following US history courses:

- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3
- HIST 205 - Historians Craft Credits: 3

HIST 205 is required
Twenty-one credits from the following groups:

Pennsylvania History
American History
Non-Western History
European History

Students desiring a secondary Social Studies - History certificate will complete credits toward specialization in addition to the required credits in Liberal Studies (45-46) and Professional Education (34).

- CDEV 248 - Human Development and Education Credits: 3
- HIST 435 - Pennsylvania Credits: 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 319 - Teaching of Social Studies in Secondary Schools Credits: 3
- SEFE 329 - Methods of Instruction in Secondary Conent Areas Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3
- SEFE 426 - Practicum in Secondary Education Credits: 1
- SEFE 455 - Student Teaching - Secondary Education Credits: 12, 9, 6,3
- SPED 315 - Special Education Issues in Diverse Secondary Classrooms Credits: 3 SPED 315 and SEFE 455 are taken the same semester


## Degree Completion Four Years BSED (Citizenship-History)

Completion Hours: 120

## Freshman Year - Total Hours: 28

- ENGL 101 - College Writing I Credits: 3
- ENGL 103-College Writing II Credits: 3
- G\&ES 105 - World Regional Geography Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 115 - Financial Mathematics Credits: 3
- MUSI 101 - Introduction to Music Credits: 3
- SASW 106 - Race and Ethnic Diversity in the U.S.A. Credits: 3


## Sophomore Year - Credits: 31

- BIOL 104 - Principles of Biology Credits: 4
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 105 - Economics of Social Issues Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HIST 153 - Twentieth Century World Credits: 3
- HIST 205 - Historians Craft Credits: 3
- HIST 237 - Outstanding Americans Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- SEFE 200 - Introduction to Education Credits: 3

Junior Year - Credits: 31

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 380 - Egyptology Credits: 3
- POLS 101-American National Government Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 329 - Methods of Instruction in Secondary Conent Areas Credits: 3
- SEFE 426 - Practicum in Secondary Education Credits: 1


## Senior Year - Credits: 30

- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since 1689 Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- POLS 348 - The Holocaust: Genocide and Political Violence Credits: 3
- SEFE 319 - Teaching of Social Studies in Secondary Schools Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3
- SEFE 455 - Student Teaching - Secondary Education Credits: 12, 9, 6,3
- SPED 315 - Special Education Issues in Diverse Secondary Classrooms Credits: 3


## Special Education

112 Special Education Building
724-738-2085

## Chair

Dennis T. Fair

## Secretary

Linda Forrest

## Faculty

Rebecca Badgett, Richael Barger-Anderson, Robert Bost, Sharon Coben, Dennis Fair, Patrick Grant, Robert Isherwood, Michelle McCollin, Joseph Merhaut, Mike Monfore, Doris O'Shea

The guidelines on admission, professional conduct, and student teaching for this department include, and may go beyond, those required for the College of Education as a whole. Details may be found in the Teacher Education Policy Manual.

The special education department's programs are for students who choose to pursue careers working with exceptional children who are identified or those who differ significantly from the "average" child to the extent that special instructional methods, materials, and/or related services are required for their education and treatment.

The department offers an undergraduate education program that includes courses in liberal studies, professional education, elementary education, and special education. Students are required to complete a minimum of 40 hours involved in direct contact with individuals who have disabilities prior to their supervised teaching assignments at the
junior/senior levels. Throughout the undergraduate program students are required to participate in experience-based learning in order to maximize their development as competent and effective future educators.

## Community Programs for Americans with Disabilities (BS)

## (no teacher certification)

Students may elect to major in special education without working for a teaching certificate. The program, Community Programs for Americans with Disabilities (CPAD) prepares professionals for a variety of community-based roles providing services for children and adults with disabilities. These roles include: case managers for intermediate care facilities, house managers for community residences, supervisors for sheltered workshops, and directors for community living arrangement programs. Students conclude the CPAD program with a 12 -credit internship within a local community-based facility.

## Requirements for the Major - Credits: 33

Students may elect to major in special education without working for a teaching certificate. The program, Community Programs for Americans with Disabilities (CPAD) prepares professionals for a variety of community-based roles providing services for children and adults with disabilities. These roles include: case managers for intermediate care facilities, house managers for community residences, supervisors for sheltered workshops, and directors for community living arrangement programs. Students conclude the CPAD program with a 12-credit internship within a local community-based facility.

## Degree Completion in Four Years

## Completion Hours: 120

## Freshman Year - Total Hours: 31

- Liberal Studies - Credits: 14
- ENGL 102 - Credits: 3
- ENGL 101 - College Writing I Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1 /Choice
- SPED 100 - Introduction to Special Education Credits: 3
- SPED 204 - Educational Aspects of the Mental Retardation Credits: 3
- SPED 212 - Life Management for Persons with Disabilities Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CDEV 342 - Educational Psychology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- SPED 105-Americans with Disabilities Credits: 3
- SPED 202 - Educational Aspects of Physical Disabilities Credits: 3
- SPED 203 - Educational Aspects of ED/LD Credits: 3


## Junior Year - Total Hours: 32

- Leisure/Rec Block - Credits: 9
- Soc-Cultural Block - Credits: 8
- Liberal Studies - Credits: 12
- SPED 250 - Seminar in CPAD Credits: 3

Senior Year - Total Hours: 27

- Management Block - Credits: 6
- Personal Develop Block - Credits: 9
- Internship - Credits: 12


## Minor in Exceptionalities

## Requirements for the Minor

Students who are studying in psychology, social work, music therapy, recreation, and teacher education may find the minor in exceptionalities to be a desirable enhancement to their major career fields. The minor is a prescribed program of 15 credits of special education courses. The Minor in Exceptionalities program does not lead to certification in special education.

## Level I

One course required

- SPED 100 - Introduction to Special Education Credits: 3


## Level II

Select two courses

- SPED 203 - Educational Aspects of ED/LD Credits: 3
- SPED 204 - Educational Aspects of the Mental Retardation Credits: 3


## Level III

Two courses required

- SPED 312 - Educational Strategies for Learners with Mild Disabilities Credits: 3
- SPED 313 - Classroom Management Strategies Credits: 3


## Special Education Certification and Dual Certification (SPEd/ELEd)

The university is authorized by the Pennsylvania Department of Education to provide certification courses and practical experiences designed to meet requirements for the Cognitive, Behavioral, and Physical Disabilities (CBPD) certificate
in special education. The teaching certificate enables graduates to teach children identified as having mental retardation, learning disabilities, physical disabilities, or behavior disorders in school placements from kindergarten through grade twelve.

While students may declare the major in special education and work for a single teaching certificate (CBPD), most students opt for the dual certification program. Students may declare the major in special education and work for a single teaching certificate, the comprehensive M/PH certificate. Students may declare the special education/elementary education major and study for elementary education teacher certification and special education certification. The special education/elementary education certification program includes credits beyond the minimum required for the baccalaureate degree. The Teacher Education Policy Manual describes procedures for students interested in pursuing multiple teaching certificates.

An integral component of pre-professional programs in special education is the requirement of a practicum experience for credit. Practicum is part of the Special Education Professional Semester which integrates strategy courses with a field experience in local school districts.

## Requirements for the Major

The specific course of study and requirements leading to teacher certification in special education are available in the Department of Special Education or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building or on the College of Education homepage.

## Degree Completion in Four Years

Dual Certification - Special Education (K-12) and Elementary Education (K-6) - BSED Special Education (BSED)

## Completion Hours: 139

Freshman Year - Credits: 35

- LS Science Goal/Lab - Credits: 3
- FYRST Seminar - Credits: 1
- Liberal Studies - Credits: 12
- SPED 200-level - Credits: 3
- PESM 161 - Credits: 1
- CDEV 248 - Human Development and Education Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 or higher
- SPED 100 - Introduction to Special Education Credits: 3

Sophomore Year - Credits: 37

- SPED 200 Level - Credits: 6
- Liberal Studies - Credits: 9
- CDEV 342 - Educational Psychology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- DANC 223 - Introduction to Creative Dance Credits: 1 or PESM 108
- ELEC 281 - Cultural Awareness in the Elementary Classroom Credits: 3
- ELEC 288 - Children's Literature Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- SEFE 200 - Introduction to Education Credits: 3

Junior Year - Credits: 37

- Liberal Studies - Credits: 6
- ELEC 301 - Math/Science Teaching Lab Credits: 1
- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- ELEC 352 - The Teaching of Language Arts Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- ELEC 372 - The Teaching of Elementary Social Studies Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 280 - Cultural Minorities in Education Credits: 3
- SPED 302 - Educational Strategies: Learners with Developmental Disabilities Credits: 3


## Senior Year - Credits: 30

- SPED Student Teaching - Credits: 6
- ELEC Student Teaching - Credits: 6
- ELEC 385 - Creativity in Elementary School Credits: 1 to 3
- SPED 306 - Educational Strageties: Severe Learning and Behavior Disorders Credits: 3
- SPED 312 - Educational Strategies for Learners with Mild Disabilities Credits: 3
- SPED 313 - Classroom Management Strategies Credits: 3
- SPED 314 - Educational Assessment of Exceptional Children Credits: 3
- SPED 400 - Special Education Practicum Credits: 3


## Sport Management

014 West Gym
724-738-2060

## Chair

Robin Ammon, Jr.

## Secretary

Herman Boler

## Faculty

Robertha Abney, Robin Ammon, Brian Crow, Catronia Higgs

The Department of Sport Management offers both undergraduate and graduate programs. The SRU sport management undergraduate program has been in existence since the mid 1970's and in that period has witnessed exponential growth and increased national prestige. The sport industry, due to its wide variety of positions, places unique demands on those involved in its management. These positions require management, marketing, accounting, finance, economics, communications, and legal skills specific to the sport setting. Therefore the preparation of a new kind of sport/business specialist is necessary. The present curriculum offers an excellent base in business foundation courses and many of the sport management students complete various minors in communication, business and other specialized areas.

The curriculum continues to be reviewed and adapted to meet the growing changes in the sport management field. Evaluations from senior student interns and agency supervisors create the basis of the university's considerations along with program standards developed jointly by two professional organizations (NASPE AND NASSM). The Sport Management Review Council of NASPE/NASSM has approved less than $20 \%$ of the top programs in the United States. We are one of the few in Pennsylvania to be an approved sport management program and Slippery Rock University is proud to be included in that select group.

## Minor in Sport Management

## Requirements for the Minor - Credits: 25

The specific course of study for this major is available from the coordinator of sport management in the Department of Physical Education and Sport Management, or from the student's advisor. The student must have at least an overall GPA of 2.25 to graduate with a minor in Sport Management.

- SPMT 150 - Practical Application Credits: 1
- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 286 - Sport Communication Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3
- SPMT 394 - Sport Marketing Credits: 3
- SPMT 450 - Sport Management Internship Credits: 12
- SPMT 494 - Sport Management Senior Seminar Credits: 3
- SPMT 506-Sport Facility and Event Management Credits: 3


## Sport Management (BS)

"The sports industry is fast paced and extremely competitive. The practical experience stressed in Slippery Rock's Sport Management program prepared me for the "real world" expectations of the industry. Even after years in collegiate athletics I find myself consistently referring back to principles learned at Slippery Rock. I know my experience at The Rock laid the foundation for the success I have achieved"

David A. Sabolcik, Jr., SRU/98
Director of Annual Giving Lobo Club
University of New Mexico
Recent estimates describe sport as one of the ten largest industries in the United States encompassing over $\$ 190$ billion dollars. This industry, due to its wide variety of positions, places unique demands on those involved in its management including skills in such areas as communications, public relations, facility management, marketing, budgeting, and legal aspects specific to sport settings.

The sport management undergraduate faculty has identified international sport as a future trend for sport management majors. It is recognized that the impact of sport on an international setting is fertile ground for tremendous development. Many recent developments demonstrate the globalization of sport and these developments indicate the continued dynamic nature accompanying the growth of sport management worldwide.

Providing our sport management majors with the opportunity to gain knowledge and hands on experience is paramount for SRU's growth as a leader in undergraduate sport management in the United States.

## Requirements for the Major - Credits: 58

This major is designed to prepare students with the necessary sport business concepts, management, marketing and public relation skills to become successful managers in sport-related agencies. These agencies are diverse and include, professional sports, Sport marketing firms, intercollegiate athletic departments, YMCA/YWCA's, sporting goods sales, fitness clubs, sport arenas, the Olympics, commercial recreational facilities and other sport-related agencies. In addition to the sport management. A 12-credit internship is required in a sport-related agency during the last semester of the program. Students are encouraged to secure a minor in business.

## Specialization Courses - Credits: 46

- SPMT 150 - Practical Application Credits: 1 (01-02-03-04)
- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 269-American Sport in the 21st Century Credits: 3
- SPMT 286 - Sport Communication Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3
- SPMT 394 - Sport Marketing Credits: 3
- SPMT 450 - Sport Management Internship Credits: 12
- SPMT 494 - Sport Management Senior Seminar Credits: 3
- SPMT 506-Sport Facility and Event Management Credits: 3
- SPMT 515 - Diversity Issues in Sport Management Credits: 3
- SPMT 586 - Sport Law Credits: 3
- SPMT 599 - Sport Management Research Management Credits: 3


## Required Support Courses - Credits: 12

- ACCT 205-Accounting for Decision Makers Credits: 3
- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Sport Management Electives - Credits: 18

Select 9 credit hours of 300 level (or above) classes from Accounting, Communication, Economics, Finance, Management or Marketing.

## Completion Hours: 120

Freshman Year - Credits: 30

- Elective - Credits: 3
- Liberal Studies - Credits: 9
- CPSC 110 - Computer Concepts Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SPMT 150 - Practical Application Credits: 1 (P see footnotes)
- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3 (P see footnotes)


## Sophomore Year - Credits: 31

- Liberal Studies - Credits: 15
- ACCT 205-Accounting for Decision Makers Credits: 3
- COMM 200 - Public Speaking Credits: 3
- MGMT 250 - Principles of Management Credits: 3 or
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3
- SPMT 150 - Practical Application Credits: 1 (P see footnotes)
- SPMT 269-American Sport in the 21st Century Credits: 3


## Junior Year - Credits: 31

- Elective - Credits: 6
- Liberal Studies - Credits: 15
- SPMT 150 - Practical Application Credits: 1 (P see footnotes)
- SPMT 286 - Sport Communication Credits: 3 (P see footnotes)
- SPMT 394 - Sport Marketing Credits: 3 (C, P see footnotes)
- SPMT 506-Sport Facility and Event Management Credits: 3 (C, P see footnotes)


## Senior Year - Credits: 28

- Liberal Studies - Credits: 3
- SPMT 450 - Credits: 12 (C, P see footnotes)
- SPMT 150 - Practical Application Credits: 1
(P see footnotes)
- SPMT 494 - Sport Management Senior Seminar Credits: 3
(C, P see footnotes)
- SPMT 515 - Diversity Issues in Sport Management Credits: 3
(C, P see footnotes)
- SPMT 586 - Sport Law Credits: 3
(C, P see footnotes)
- SPMT 599 - Sport Management Research Management Credits: 3 (C, P see footnotes)


## Footnotes

$(\mathrm{P})=$ Prerequisite required
(C) = Coded course; acceptance to the major required

## College of Health, Environment \& Sciences

325 Physical Therapy Building<br>724-738-4862

## Interim Dean

Susan Hannam

## Assistant to the Dean

Wendy Stuhldreher

## Administrative Assistant

Stacey Booth

## Secretary

Robin Campbell

## Departments

Biology
Chemistry and Physics
Exercise and Rehabilitative Sciences
Geography, Geology, and the Environment
Health and Safety
Mathematics
Nursing
Parks and Recreation/Environmental Education
Psychology
School of Physical Therapy
The primary mission of the College of Health, Environment, and Science is to provide quality undergraduate and graduate programs that prepare students for a variety of human service, science, and environmental professions. The major fields of study leading to a bachelor of science, bachelor of science in education, bachelor of arts, or bachelor of science in nursing are described under the appropriate departments, which include: health and safety, exercise and rehabilitative sciences, nursing, parks and recreation/environmental education, biology, chemistry and physics, geography, geology, and the environment, mathematics, and psychology. The natural sciences and mathematics programs offer a wide range of opportunities that enhance students' awareness of the natural environment and prepare
students to engage in logical thought processes. Curricula provide a broad liberal arts foundation and a specialized body of knowledge in a selected area of study. Many programs incorporate a wide range of applied learning opportunities, such as laboratories, field experiences, and internships. Following completion of the undergraduate program, many students pursue graduate study in the health professions including medicine, pharmacy and chiropractic, or advanced graduate work in their area of specialization. Students pursuing teacher education programs in environmental education are expected to meet all admission and retention criteria as described in the teacher education section.

In addition, the College offers an interdisciplinary program in gerontology, health informatics, medical technology, cytotechnology and other areas of specialization.

## Institute for the Environment

The Institute for the Environment at Slippery Rock University started operation in 1994. Its mission is to provide interdisciplinary, interuniversity, and international opportunities for faculty, students, staff, and community members to work together for the improvement of the total environment (physical, biological, human). Institute members will serve as environmental leaders through scholarly endeavors such as research, grant writing, curriculum development, university and community service, and international experience.

## Biology

## 123 Vincent Science Hall <br> 724-738-2023

## Chair

Jerry Chmielewski

## Secretary

Deborah Andrews

## Faculty

Simon Beeching, Jerry Chmielewski, Dean DeNicola, Mary Dominiecki, Wayne Forbes, Thomas Gaither, Jack Layne, Susan Rehorek, Mark Shotwell, William Sigmund, Carolyn Steglich, Steven Strain, Jeff Taylor
"Slippery Rock has an amazing Biology program. The professors are very supportive and I thought of them as my family away from home. Work hard and don't expect an easy ride - the rewards and satisfaction you receive after graduation make it all worth it though."

## Angela Hollis, MD ‘99

The fundamental mission of the Department of Biology is to provide students with a comprehensive, contemporary understanding of the biological sciences by enthusiastically offering experiences that are stimulating and challenging. The goal of these efforts is to foster an appreciation for the complexities of living systems and to promote the development of competent biologists and scientifically literate citizens that are prepared to continue their learning throughout their various life-long endeavors.

Our curriculum introduces the student to basic biological principles at the molecular, cellular, organismal, and population levels. The degree programs offered by the Department of Biology provide either breadth of training in the biological sciences, concentrations in botany or zoology, or concentrations in the paramedical fields of Medical Technology or Cytotechnology. Several year plus degree options are also available, thus facilitating smooth transition to degrees in physical therapy at Slippery Rock University, osteopathic medicine at Lake Erie College of Osteopathic Medicine (LECOM), and pharmacy at the LECOM School of Pharmacy (see Pre-Professional Programs). Specialized opportunities exist for participation in undergraduate research and for off campus study (e.g. international experiences, internships, marine science).

Graduates may select careers in academia, business, health profession, teaching, industry, or government. Whatever their individual specializations, the biology faculty share a commitment to students and have a genuine concern for their professional development.

Students majoring or minoring in biology must maintain at least a 2.000 average in biology. Before progressing to a 200 -level course, students must earn a 2.000 in 100-level basic requirement biology courses. Students may register in 200-level biology courses in any order but must maintain a biology average of 2.000 or better, before progressing to another course. A student must repeat any 200 -level course that brings the biology average below a 2.000 . Students must complete the 200 core sequence before progressing to 300 - and 400 -level courses in the major. Students should complete all 200 -level biology requirements by the end of their sophomore year.

## Biology (BA)

See the Department of Biology for more information

## Requirements for the Major - Credits: 32

Biology Courses - Credits: 32
Basic Requirements - Credits: 17

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 492 - Biology Seminar Credits: 1


## Additional requirements - Credits: 9

- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3 or BIOL 465
- BIOL 370 - Molecular Biology Credits: 3
- BIOL 401 - Ecology Credits: 3
- BIOL 410 - Animal Physiology Credits: 3 or BIOL 451
- BIOL 451 - Plant Physiology Credits: 3 or BIOL 410
- BIOL 465 - Plant Anatomy Credits: 3 or BIOL 340


## Electives - Credits: 6

Select two courses from the above or any approved 300 or 400-level biology majors course. Additional electives may be selected from the Marine Science offerings.

Chemistry Courses - Credits: 12

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1


## Mathematics Course - Credits: 4

- MATH 125 - Precalculus Credits: 4


## Physics Course - Credits: 3

- PHYS 201 - Elements of Physics I Credits: 3


## Recommended Courses

- Any CPSC course
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1


## Degree Completion in Four Years Biology (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- Liberal Studies/Electives - Credits: 1
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CPSC 110 - Computer Concepts Credits: 3 (recommended)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3

Sophomore Year - Total Hours: 32

- Liberal Studies/Electives - Credits: 3
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202-Organic Chemistry II Credits: 3 (recommended)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1 (recommended)
- COMM 200 - Public Speaking Credits: 3
- MATH 125 - Precalculus Credits: 4
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3

Junior Year - Total Hours: 30

- BIOL Electives - Credits: 9
- Liberal Studies/Electives - Credits: 18
- PHYS 201 - Elements of Physics I Credits: 3

Senior Year - Total Hours: 29

- BIOL Electives - Credits: 6
- Liberal Studies/Electives - Credits: 22
- BIOL 492 - Biology Seminar Credits: 1


## Biology (BS)

See the Department of Biology for more information.

## Requirements for the Major - Credits: 41

## Independent Study Option - Credits: 41

Basic Requirements - Credits: 20

Biology Courses:

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 490 - Independent Study Credits: 1 to 3
- BIOL 492 - Biology Seminar Credits: 1

Additional Requirements - Credits: 15

- BIOL 310 - Plant Systematics Credits: 3
- BIOL 325 - Biometry Credits: 3
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 370 - Molecular Biology Credits: 3
- BIOL 401 - Ecology Credits: 3
- BIOL 410 - Animal Physiology Credits: 3
- BIOL 451 - Plant Physiology Credits: 3

Electives - Credits: 6

Select two courses from the above or any approved 300 or 400-level biology major courses. Additional electives may be selected from the Marine Science offerings.

## Non-Independent Study Option - Credits: 41

As in the Independent Study track except substitute an additional 300- or 400-level majors course in biology in place of BIOL 490. Additional electives may be selected from the Marine Science offerings.

## Chemistry Courses - Credits: 19

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1

Plus One Advanced Elective From:

- CHEM 335 - Biochemistry Credits: 3 or advanced chemistry course approved by Department of Biology chairperson.


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 7

- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Recommended Courses:

Any CPSC course

## Degree Completion in Four Years

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 1
- Computer Science Course (Recommended) - Credits: 3
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 125 - Precalculus Credits: 4

Sophomore - Total Hours: 29

- Liberal Studies/Electives - Credits: 6
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- COMM 200 - Public Speaking Credits: 3
- MATH 225 - Calculus I Credits: 4

Junior Year - Total Hours: 31

- BIOL Electives - Credits: 12
- Liberal Studies/Electives - Credits: 12
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Senior Year - Total Hours: 30

- BIOL Electives - Credits: 9
- Liberal Studies/Electives - Credits: 14
- BIOL 490 - Independent Study Credits: 1 to 3
- BIOL 492 - Biology Seminar Credits: 1
- CHEM 335 - Biochemistry Credits: 3


## Chiropractic

## Logan College of Chiropractic

Under the provisions of this program, students will matriculate at Slippery Rock University (SRU) for a minimum of 90 semester hours in course work leading toward the Bachelor of Science Degree in Biology. Students are admitted at Logan College of Chiropractic (LCC) only as first year doctorate of chiropractic students. Upon completion of the first year of studies at LCC a maximum of 34 LCC credits may be transferred toward completion of the Bachelor of Science Degree in Biology at SRU. An official transcript must be sent from LCC to the Dean of the College of Health, Environment, and Science at SRU, and the student must request application materials for graduation. While enrolled at SRU, students will complete all required course work as outlined below and described in the SRU Catalog.

Students should be aware of the following major points as they apply to this agreement:
i.The acceptance of transfer credits or testing toward completion of degree requirements shall be governed by current policies at SRU. However, no more than 20 credits of required courses, and NONE of the science credits required for admission to LCC may be earned via examination or transfer from another school.
ii.All students will complete a minimum of 100 hours of volunteer work with a licensed chiropractic professional prior to applying to LCC.
iii.Students who earn less than a 3.25 GPA, but at least a 2.75 GPA will be eligible for admission to LCC, and will receive appropriate consideration in the admission process for having completed the SRU Pre-Chiropractic Program, but will not receive the assurance of a seat reserved for students earning a 3.25 or higher GPA.
iv.Students will make application to LCC one year in advance of their desired entrance date and will complete all required application procedures thereafter in a timely manner, including submission of recommendation and a satisfactory interview.
v.Students enrolled in the Pre-Chiropractic Program from SRU who successfully complete all course work in the first two 15 week trimesters at LCC with C's or better will be granted the Bachelor of Science degree in Biology from SRU, provided they have met all other graduation requirements.
vi.Students shall pay the appropriate tuition and fees to each institution for all course work taken at that institution. During their first year of study at LCC, students shall not be registered for courses at SRU, but shall pay any fees required to maintain their registration toward the baccalaureate degree. Upon completion of the first year of study at LCC, students shall be responsible for any fees regularly charged by SRU for transfer of credits and awarding the baccalaureate degree.

## Required courses at SRU:

## Biology Courses - Credits: 25

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 492 - Biology Seminar Credits: 1

Chemistry Courses - Credits: 19

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 7

- PHYS 211-General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Cytotechnology (BS)

Cytotechnologists are highly skilled laboratory professionals who enjoy excellent opportunities in the present job market, which include hospital laboratories, private clinics and cancer research laboratories. In our 3+1 program the student spends three years in coursework at Slippery Rock University and one calendar year in clinical and didactic study at an American Medical Association accredited hospital school of cytotechnology.

During the three years on campus the student earns a minimum of 91 credits. Upon the successful completion of the clinical 12 months, the university accepts 29 semester credits in transfer and awards the bachelor of science degree. Because of the nature of the cytotechnology curriculum, transfer students are strongly urged to earn 64 credits at Slippery Rock University.

Slippery Rock University is formally affiliated with the Fletcher Allen Health Care, Burlington, VT, and the School of Cytotechnology, Albany Medical College, Albany, NY.

Note: A 2.000 average must be maintained in BIOL 104, 210, 213, 214, 215, 216, 217, and 250 before cytotechnology students can move on to the next required course. See also Department of Biology guidelines for further restrictions.

## Requirements for the Major - Credits: 50

## Biology Courses - Credits: 26

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 213 - Medical Immunology Credits: 1
- BIOL 214 - Medical Parasitology Credits: 1
- BIOL 215 - Medical Mycology Credits: 1
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- BIOL 250 - Genetics Credits: 4
- BIOL 335 - Cell Biology Credits: 3
- BIOL 470 - Histology Credits: 3


## Chemistry Courses - Credits: 16

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Course - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Marine Science

## Coordinators

Simon Beeching, Tamra Schiappa
Marine biology, marine ecology, marine geology and geophysics, chemical oceanography, and physical oceanography are career areas that are best approached through an undergraduate major in one of the basic sciences of biology, chemistry, geology or physics, or through mathematics. Slippery Rock University, through its membership in the Marine Science Consortium, offers students interested in ocean-related phenomena an opportunity to pursue that interest through a series of summer courses offered at the Wallops Island Marine Science Center, near the Atlantic Ocean in the Virginia eastern shore region. Four three-week summer sessions are offered.

Students interested in marine studies will pursue a major in one of the natural sciences or mathematics at SRU, augmenting their studies with summer courses at the Wallops Island Marine Science Center. The number of summer courses taken will depend on the students' interests and the majors they pursue on campus. Individual programs may be tailored in consultation with an advisor, and the Department of Biology offers a minor in Marine Biology.

The Marine Science Consortium pools the talents and resources of 16 colleges and universities in the mid-Atlantic States. Classrooms, wet and dry laboratories, computer room, a workshop, dock facilities, dormitories, apartments, a cafeteria and recreational facilities are available at or near the Wallops Island Station. Several research and training vessels are available for work along the Atlantic coast and the Chesapeake Bay. Some courses offered at the Marine Science Center may be applied to the liberal studies requirement in the natural sciences so that any Slippery Rock University student, regardless of major, may take advantage of a first-hand experience in the marine environment. Advisement from one of the Slippery Rock University faculty members associated with the consortium is recommended for any student using Marine Science Consortium courses to fulfill the liberal studies requirement in science. Students should contact the Department of Geography, Geology, and the Environment or the Department of Biology for names of the advisors.

## Medical Technology (BS)

Slippery Rock University's medical technology program involves three academic years of study on campus and one calendar year at an approved, affiliated school of medical technology or one acceptable to SRU. During the first three years of the program the student must complete a minimum of 91 semester credits.

After the sophomore year, the student applies for admission to a school of medical technology where acceptance is on a competitive basis. Successful completion of the internship program results in the awarding of the bachelor of science degree. Certification as a medical technologist is obtained by passing the Board of Registry Medical Technologists examination of the American Society of Clinical Pathologists and/or the Clinical Laboratory Scientist examination of the National Certification Agency for Medical Laboratory Personnel. Because of the nature of the medical technology curriculum, transfer students are strongly urged to earn 64 credits at Slippery Rock University.

Note: A 2.000 average must be maintained in BIOL 104, 210, 213, 214, 215, 216, 217 and 250 before medical technology students can move on to the next required course. See also Department of Biology guidelines for further restrictions.

## Requirements for the Major - Credits: 50

## Required Courses

## Biology Courses - Credits: 26

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 213 - Medical Immunology Credits: 1
- BIOL 214 - Medical Parasitology Credits: 1
- BIOL 215 - Medical Mycology Credits: 1
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 335-Cell Biology Credits: 3
or
- BIOL 370 - Molecular Biology Credits: 3


## Chemistry Courses - Credits: 16

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1

Mathematics Courses - Credits: 4

- MATH 225 - Calculus I Credits: 4

Physics Courses - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Minor in Biology

Requirements for the Minor - Minimum Credits: 17
Required Courses - Credits: 12

One 100-level course with lab. Two of the following courses:

- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4

Elective Courses - Credits: 5

Minimum of 5 credits selected from approved courses numbered 300 or above. Additional electives may be selected from the Marine Science offerings.

## Minor in Marine Science

Requirements for the Minor - Minimum Credits: 26-27

## Required Courses

Biology Courses - Credits: 3/4

- BIOL 101 - General Biology Credits: 3
or
- BIOL 104 - Principles of Biology Credits: 4

Chemistry Courses - Credits: 8

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1


# Environmental Geosciences Courses - Credits: 3 

- EGEO 131- Oceanography Credits: 3

Marine Science Courses - Credits: 12

- MARS 241 - Marine Biology Credits: 3
- MARS 331 - Chemical Oceanography Credits: 3
- MARS 362 - Marine Geology Credits: 3 plus 3 additional credits from the Marine Science course list.


## Osteopathic Medicine

## Lake Erie College of Osteopathic Medicine (LECOM)


#### Abstract

Under this joint agreement between Lake Erie College of Osteopathic Medicine (LECOM) and Slippery Rock University (SRU), select undergraduate students who have successfully completed specific course work at SRU may continue their education in medicine at LECOM. This program is comprised of two phases: Phase I consists of the first three years of undergraduate education at SRU; Phase II consists of the remaining four years of medical school education at LECOM and its associated clinical sites. Slippery Rock University will confer the Bachelor of Science degree in Biology to Slippery Rock students who have successfully completed the Slippery Rock courses in Phase I at SRU and the first four semesters (pre-clinical) of LECOM's Academic curriculum.

To be eligible for the " $3+4$ " Program, SRU students must satisfy the requirements listed below for the Bachelor of Science degree in Biology at SRU for the " $3+4$ " program, and indicate interest to enter into the " $3+4$ " Program during their sophomore year. To gain final acceptance to Phase II of the " $3+4$ " Program, students must apply through the American Association of Colleges of Osteopathic Medicine (AACOMAS) to LECOM by August 30 beginning the third year. A LECOM Secondary application must also be completed prior to scheduling an Admissions Interview. Letters of recommendation and supporting documentation, including certified transcripts from all undergraduate and graduate institutions attended, must be submitted for review by LECOM.


Admissions to LECOM is subject to the applicant's meeting the following criteria:

## i.SAT minimum 1100

ii.High School Grade Point Average 3.4 or better
iii.High School Class Rank Top 25\%
iv.Slippery Rock University GPA (by end of junior year) 3.3 or better
v.MCAT (taken at the end of the junior year or earlier) 24 minimum total score; no lower than 7 in any category. vi.Consideration is also given to personal traits and demonstrated desire to become an osteopathic physician.
vii.Appropriate letters of recommendation

Students successful in Phase I will be interviewed by LECOM in the third year prior to admission to Phase II of the " $3+4$ " program. Final acceptance of candidates to Phase II of the " $3+4$ " Program will be determined by LECOM.

Students will be awarded the Bachelor of Science degree in Biology from SRU upon receipt of an official transcript from LECOM indicating successful completion (grade of "C" or better in each course) of the first year of LECOM's curriculum. Students will be awarded the degree of Doctor of Osteopathic Medicine by LECOM after successfully completing the complete four-year medical curriculum, successfully passing COMLEX I and COMLEX II of the National Board of Osteopathic Medicine Examiners, and otherwise satisfying all other requirements as identified by LECOM for graduation.

## Required courses at SRU:

## Biology Courses - Credits: 25

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 410 - Animal Physiology Credits: 3


## Chemistry Courses - Credits: 19

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111-General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3
(or courses approved by the Biology Department Chairperson)


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 7

- PHYS 211-General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Pharmacy - Biology

The Lake Erie College of Osteopathic Medicine (LECOM) School of Pharmacy and Slippery Rock University (SRU) are committed to the training of future pharmacy practitioners. Slippery Rock University and LECOM School of Pharmacy offer an accelerated, five-year Doctor of Pharmacy program. Under this joint agreement students will successfully complete the two-year undergraduate program in pre-pharmacy at SRU and then matriculate into LECOM School of Pharmacy to complete the professional curriculum of the Doctor of Pharmacy degree (Pharm.D) in three years. The accelerated professional pharmacy curriculum at LECOM School of Pharmacy is offered in a 12-month program per academic year.
The " $2+3$ " Accelerated Pharmacy Program is an early entry pre-pharmacy program that will give students the opportunity to complete their pharmacy education in two phases: Phase I consists of the first two years of undergraduate education at SRU; and Phase II consists of the remaining three years of pharmacy education at LECOM School of Pharmacy.

For admission to Phase I of the Program, students must fulfill the following requirements:
i.SAT scores (or ACT scores) - 1100 (total of 24)
ii.High School Grade Point Average - 3.2 or better out of 4.0
iii.Class rank - Top 25\% of the class
iv.Recommendation - Two letters of recommendation
v.Candidate potential - Evidence of scholarly activities and desire to become a pharmacist

For admission to Phase II of the Program, students must fulfill the following requirements:
i.Complete the pre-pharmacy curriculum in Phase I of the " $2+3$ " Accelerated Pharmacy Program, as described below.
ii.Earn a minimum GPA of 3.2 in Phase I of the program with no individual grade lower than a "C".
iii.Earn a GPA of 3.2 or higher for science and mathematics courses.
iv.Submit two letters of recommendation. One of these letters must be from the Health Professions Committee at SRU. The letter will address personal growth of the student during Phase I of the program, as well as the student's maturity, responsibility, and desire to become a pharmacist.
v.Demonstrates leadership potential and commitment to the pharmacy profession.
vi.Submit a completed application for admission to the LECOM School of Pharmacy.

Prospective students should contact LECOM directly for anticipated admission guidelines at 814.866 .6641 or at pharmacy@lecom.edu. The Doctor of Pharmacy Degree will be conferred upon successful completion of Phase I and Phase II of the program, both didactic and clinical, and recommendation by both the faculty and administration of LECOM School of Pharmacy.

Additional information is available at www.lecom.edu/pharmacy/agreement/affiliation.htm.

## Required courses at SRU:

## Biology Courses - Credits: 11

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 325 - Biometry Credits: 3


## Chemistry Courses - Credits: 16

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4

Physics Courses - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Other Courses - Credits: 30

- Computer Science
- College Writing I \& II
- Public Speaking
- Economics
- Psychology or Sociology
- Behavioral Science
- Liberal Studies (9)


## Pre-medical, -dental, -veterinary, -optometry, -chiropractic, Pharmacy, and -podiatry

123 Vincent Science Hall
724-738-2023
Students interested in these pre-professional programs are requested to contact the chairperson of the Department of Biology. These professional schools do not generally indicate a preference for a particular major. However, they do encourage students to have a liberal arts background with an ability to communicate and a strong concentration in the sciences. Students are advised to take at least one year of biology coursework, two years of chemistry (two semesters of general chemistry and two semesters of organic chemistry), one year of physics, and mathematics through calculus.

## Teacher Certification in Biology

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in biology must earn a bachelor of arts or a bachelor of science degree in biology and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the Secondary Education/Foundations of Education office in 114 McKay Education Building.

## Chemistry and Physics

327 Vincent Science Hall
724-738-2031

## Chair

Paul Birckbichler

## Secretary

Cheryl Dolan

## Faculty

Paul Birckbichler, Hans Fellner, Athula Herat, Robert Hutchins, Rizwan Mahmood, Krishna Mukherjee, Ben Shaevitz, Mary Sisak, Donald Zapien, Susan Zirpoli
"Slippery Rock was a life-altering experience for me. The chemistry courses I took as a freshman, and great professors, set my life's direction."

Randy Russell<br>Chairman and President of Ranbar Technology, Inc. and Ranbar Electrical Materials, Inc.<br>Vice Chairman of Preservation Technologies, LLP

## Certification in Nanofabrication

## Requirements for the Certification

Nanofabrication is a technology that grew out of making semiconductor chips. The need for faster computers has resulted in transistors getting smaller and smaller over time ( $\sim 100$ nanometers in length). These objects are so small that nanofabrication technology has become "machining at the atomic level" and it has spread from being used to make chips to being used to make a variety of technological innovations, including, artificial organs, tiny valves, and flat screen televisions. Nanofabrication and nanotechnology are engineering at the atomic length scale - a size range which until recently was only available to nature. Being able to engineer such small things opens the door to a multitude of new opportunities. These include making extremely fine diameter but incredibly strong fibers atom by atom, making extremely small probes that can look at individual strands of DNA for uses such as disease detection, and man-made capillary systems to bring nutrients to man-created replacement organs.

This Certification program is possible as part of an educational partnership between the SSHE System Universities and The Pennsylvania State University. Students wishing to earn a NMT Certificate must spend one semester at the Penn State Nanofabrication Facility in a hands-on nanofabrication "capstone experience." Students enrolled in the NMT program are required to take six courses ( 18 credit hours) at Penn State main campus. These courses can be taken in one semester (preferred) and or spread out to two or three semesters. These courses can be taken in any semester after sophomore year preferably summer or after graduation from Slippery Rock.

Requirements for entry into the Nanofabrication Program

- Introductory or General Chemistry with Laboratory
- College Algebra or higher math course
- Introductory Statistics
- Technical or Engineering Physics including electricity and circuits
- Microcomputer basics
- College Writing I
- Department recommendation


## Chemistry (BA)

A chemistry major studies the chemical properties of substances in order to develop the ability to make discoveries and to solve the vast array of problems associated with existing technologies. Four programs of study leading to a bachelor of science degree and one leading to a bachelor of arts degree are available. The bachelor of arts program allows students to choose more elective courses in order to link chemistry with some other interest such as marketing/sales or patent law. The bachelor of science programs

The science and math courses requirements taken during the first two years in our programs are almost identical.

A pharmacy option in the biochemistry program enables students to take advantage of a $3+3$ affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy.

All of our students are strongly encouraged to do research under the direction of one of our faculty.

SRU graduates perform research and development at large corporations and small companies. Others are high school teachers and university professors.

## College-Wide Requirements:

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- MATH 225 - Calculus I Credits: 4


## Requirements for the Major - Credits: 38-39

Chemistry Courses - Credits: 31-32
plus 3-4 credits at the 300 level or above.

- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213-General Physics III Credits: 3


## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 14
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CHEM Elective - Credits: 3
- Liberal Studies - Credits: 16
- Modern Languages - Credits: 3
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1

Senior Year - Total Hours: 30

- Modern Language - Credits: 6
- Electives - Credits: 13
- Liberal Studies - Credits: 3
- CHEM 350-Analytical Chemistry Credits: 3
- CHEM 351-Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Chemistry (BS)

A chemistry major studies the characteristics and interactions of matter in order to develop a rational perspective toward chemical information and technology. Two programs of study are available: bachelor of arts and bachelor of science. The bachelor of arts program allows more flexibility in choosing electives to complement the students interests and career goals. The bachelor of science program, which requires more credits in chemistry, is designed to prepare students for postgraduate chemistry programs and technical careers in the chemical industry. Both programs are designed to steadily develop the quantitative, deductive and inductive reasoning skills chemists are expected to have. Students in either program are strongly encouraged to do research under the direction of one of our faculty.

A 3+3 affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy (LECOM) has been established, thus facilitating smooth transition for a degree in pharmacy (see Pre-Professional Programs and/or School of Physical Therapy.

Graduates are qualified and prepared for the variety of professional positions available to chemists in industry or government. Alternatively, graduates can pursue further education in chemistry, engineering, medicine and a number of other science related programs. Students seeking state certification in secondary education must also complete requirements for a Master of Education degree.

Forensic Chemistry is a new B.S. degree program in chemistry. It includes the 32 -credit core that is common to all the chemistry baccalaureate degree programs and all but three of the courses in the biochemistry concentration. Two courses in criminal justice/sociology and forensic analysis provide the forensic science specialization.

The SRU student chemistry affiliate chapter of the American Chemical Society has won national awards on three occasions in recent years. Among student activities are field trips, local events such as "Chem. Games" and independent research projects with members of the faculty, often leading to presentations at American Chemistry Society meetings.

Chemistry majors graduating from Slippery Rock University have gone on to pursue a variety of careers. Examples include positions in industry, secondary education certification, attending graduate school, and attending professional schools, including dentistry, pharmacy, and medicine.

## College-Wide Requirements:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- MATH 225 - Calculus I Credits: 4


## Requirements for the Major - Credits: 59

## Required Courses for the Chemistry (BS) - Biochemistry Track

## Chemistry Courses - Credits: 32

- CHEM 337
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 337 - Biochemistry II Credits: 3
- CHEM 338 - Biochemistry Laboratory II Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213-General Physics III Credits: 3


## Biology Courses - Credits 17

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 335 - Cell Biology Credits: 3
- BIOL 370 - Molecular Biology Credits: 3


## Required Courses for the Chemistry (BS) - Environmental Track

Chemistry Courses - Credits: 36

- CHEM 108-General Chemistry II Credits: 3 (* see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202-Organic Chemistry II Credits: 3 (* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 340-Air Quality Assessment Credits: 4
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3 or
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213-General Physics III Credits: 3

Biology Courses - Credits: 8

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 357 - Environmental Microbiology Credits: 4


## Environmental Geosciences Courses - Credits: 5

- EGEO 451-Geochemistry Credits: 4
- EGEO 453 - Geotechniques: Geochemistry Credits: 1


## Required Courses for the Chemistry (BS) - Forensic Track

## Chemistry Courses - Credits: 32

- CHEM 108-General Chemistry II Credits: 3 ( ${ }^{*}$ see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202 - Organic Chemistry II Credits: 3
(* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 415 - Forensic Anal Credits: 3
- CHEM 416 - Forensic Anal Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Mathematics Courses - Credits: 7

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213 - General Physics III Credits: 3

Biology Courses - Credits: 11

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 370 - Molecular Biology Credits: 3

Sociology Courses - Credits: 6

- SASW 205
- SASW 469


## Required Courses for the Chemistry (BS) - Non-Specialized Track

## Chemistry Courses Credits: 37

plus one credit from 496 and 6 credits at the 300 level or above.

- CHEM 108 - General Chemistry II Credits: 3
(* see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202 - Organic Chemistry II Credits: 3
(* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 8

- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4

Physics Courses - Credits:7

- PHYS 212 - General Physics II Credits: 4
- PHYS 213-General Physics III Credits: 3


## Biology Courses - Credits: 4

- BIOL 104 - Principles of Biology Credits: 4


## Degree Completion in Four Years Chemistry (BS) - Biochemistry Track

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 11
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 9
- BIOL 330 - Microbiology Credits: 3
- BIOL 335-Cell Biology Credits: 3
- CHEM 301-Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1

Senior Year - Total Hours: 30

- Liberal Studies - Credits: 19
- CHEM 337
- BIOL 370 - Molecular Biology Credits: 3
- CHEM 337 - Biochemistry II Credits: 3
- CHEM 338 - Biochemistry Laboratory II Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Degree Completion in Four Years Chemistry (BS) - Environmental Track

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202-Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 9
- BIOL 357 - Environmental Microbiology Credits: 4
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 340 - Air Quality Assessment Credits: 4
- CHEM 370 - Water Quality Assessment Credits: 4

Senior Year - Total Hours: 30

- Liberal Studies/Elective - Credits: 17
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1
- EGEO 451 - Geochemistry Credits: 4
- EGEO 453-Geotechniques: Geochemistry Credits: 1

Degree Completion in Four Years Chemistry (BS) - Forensic Track

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 8
- SASW 205
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 225 - Calculus I Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 7
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- MATH 230 - Calculus II Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 15
- BIOL 370 - Molecular Biology Credits: 3
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350-Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1

Senior Year - Total Hours: 30

- SASW 469 - Credits: 3
- Liberal Studies - Credits: 11
- Electives - Credits: 8
- CHEM 415 - Forensic Anal Credits: 3
- CHEM 416 - Forensic Anal Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Degree Completion in Four Years Chemistry (BS) - Non-Specialized Track

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 11
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- MATH 231 - Calculus III Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 15
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- PHYS 212 - General Physics II Credits: 4

Senior Year - Total Hours: 30

- CHEM Electives - Credits: 6
- Liberal Studies/Electives - Credits: 15
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1
- CHEM 496 - Research Credits: 1 to 3


## Footnote

*Students must earn at least a "C" or better in these courses to register for Chemistry courses numbered 300 or above.

## Minor in Chemistry

## Requirements for the Minor

## Required Courses

## Option A:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202-Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 475 - Advanced Organic Synthesis Credits: 5


## Option B:

- CHEM 225
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 302 - Physical Chemistry II Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 322 - Physical Chemistry Laboratory II Credits: 1


## Minor in Physics

## Requirements for the Minor

Two courses at or above the 300 level and the following:

- PHYS 211 - General Physics I Credits: 4
- PHYS 212 - General Physics II Credits: 4
- PHYS 213-General Physics III Credits: 3


## Pharmacy - Chemistry

A 3+3 affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy (LECOM) would give the students in SRU's Biochemistry program a pharmacy option. Students selecting this option would receive a B.S. degree in Chemistry (Biochemistry Concentration) after completing the first year of a 3-year doctoral program at LECOM. Twenty-seven credits, including 9 in chemistry, 4 in biology, and 6 in liberal studies, would be transferred from LECOM to SRU at that time. Please read the Pharmacy - Biology option for further details on admission requirements, etc.

Biochemistry students, who choose the pharmacy option, would complete nearly the same curriculum at SRU as those who do not choose the pharmacy option. Computer Science (130 or 140), required in our current Biochemistry program, is replaced by Elementary Statistics (Math 114) in the pharmacy option.

All courses from LECOM transfer to the B.S. Chemistry program - Biochemistry/Pharmacy option. Four LECOM courses replace four SRU courses from our current Biochemistry program. The SRU courses are Microbiology (Biol 333), Cell Biology (Biol 335), Molecular Biology (Biol 370) and either Analytical Chemistry (Chem 350, 351) or Instrumental Analysis (Chem 425, 426).

## Required courses at SRU:

## Biology Courses - Credits: 8

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4


## Chemistry Courses - Credits: 32

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 338 - Biochemistry Laboratory II Credits: 1


## Chemistry Electives - Credits: 4

- CHEM 350-Analytical Chemistry Credits: 3
- CHEM 351-Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Mathematics Courses - Credits: 11

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 7

- PHYS 211-General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Physics (BA)

Physicists study the world around us in order to discover the basic principles or laws which govern the natural world. As a physicist you can:

- Seek to understand the origin of the universe and the ultimate structure of matter;
- Study the principles underlying the structure of materials in order to design faster computer chips or improved liquid crystals used for electronic displays;
- Work in hands-on lab courses studying laser-based optics, learn electronic instrumentation for the physical sciences including the computer acquisition and analysis of data, and use modern lab equipment such as the electron spin resonance spectrometer which can detect the radiation from individual atoms;
- Acquire the theoretical and experimental background for work in areas such as acoustics, astrophysics, biophysics, chemical physics, computer science, education mathematical physics, and engineering.
Developments in science and technology move very fast and a degree in physics provides you with the fundamental tools, which you will need in order to attack the scientific and technological problems of this millennium.

An undergraduate degree in Physics gives students a broad, deep, rigorous understanding to solve many types of quantitative problems, a skill which is useful to many different careers in computers, engineering, finance, etc. With the rapid and unpredictable pace and direction of technological advance, training in physics gives the undergraduate their most important skill, namely the ability to think clearly and rigorously about a technical problem which may arise in the workplace.

## Requirements for the Major - Credits: 39

A language is required of all BA majors.

## Required Courses - Credits: 19

- PHYS 212 - General Physics II Credits: 4
- PHYS 213 - General Physics III Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4


## Elective Physics - Credits: Select 6

- PHYS 315 - Engineering Mechanics II: Dynamics Credits: 3
- PHYS 325-Analog \& Digital Electronics Credits: 3
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 480 - Quantum Credits: 3
- PHYS/CHEM 301 - Physical Chemistry I Credits: 3

Related Field Work - Credits: 14

- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3


## A Language is Required of all BA Majors

## Specialization: Engineering

See the Pre-professional Programs section.

## Degree Completion in Four Years Physics (BA)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 11
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 16
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- PHYS 212 - General Physics II Credits: 4

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 15
- Modern Languages - Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4

Senior Year - Total Hours: 30

- PHYS Elective - Credits: 6
- Modern Language - Credits: 6
- Electives - Credits: 15
- Liberal Studies - Credits: 3


## Physics (BS)

Physicists study the world around us in order to discover the basic principles or laws which govern the natural world. As a physicist you can:

- Seek to understand the origin of the universe and the ultimate structure of matter;
- Study the principles underlying the structure of materials in order to design faster computer chips or improved liquid crystals used for electronic displays;
- Work in hands-on lab courses studying laser-based optics, learn electronic instrumentation for the physical sciences including the computer acquisition and analysis of data, and use modern lab equipment such as the electron spin resonance spectrometer which can detect the radiation from individual atoms;
- Acquire the theoretical and experimental background for work in areas such as acoustics, astrophysics, biophysics, chemical physics, computer science, education mathematical physics, and engineering.
Developments in science and technology move very fast and a degree in Physics provides you with the fundamental tools, which you will need in order to attack the scientific and technological problems of this millennium.

An undergraduate degree in Physics gives students a broad, deep, rigorous understanding to solve many types of quantitative problems, a skill which is useful to many different careers in computers, engineering, finance, etc. With the rapid and unpredictable pace and direction of technological advance, training in physics gives the undergraduate their most important skill, namely the ability to think clearly and rigorously about a technical problem which may arise in the workplace.

## Requirements for the Major - Credits: 57

## Required Courses - Credits: 30

- PHYS 212 - General Physics II Credits: 4
- PHYS 213-General Physics III Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 371 - Physical Optics Credits: 3
- PHYS 381-Advanced Physics Laboratory Credits: 2 (must take twice)
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 411 - Modern Physics Credits: 4
- PHYS 480 - Quantum Credits: 3


## Elective Physics - Credits: Select 6

- PHYS 315 - Engineering Mechanics II: Dynamics Credits: 3
- PHYS 325 - Analog \& Digital Electronics Credits: 3
- PHYS/CHEM 301 - Physical Chemistry I Credits: 3

Related Field Work - Credits: 21

- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 301 - Differential Equations I Credits: 3


## Degree Completion in Four Years Physics (BS)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 7
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 211-General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 16
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- PHYS 212 - General Physics II Credits: 4

Junior Year - Total Hours: 30

- PHYS Electives - Credits: 6
- Liberal Studies - Credits: 9
- MATH 301 - Differential Equations I Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4

Senior Year - Total Hours: 30

- Liberal Studies - Credits: 19
- PHYS 371 - Physical Optics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 480 - Quantum Credits: 3


## Pre-engineering

## 327 Vincent Science Hall

724-738-2074
In a cooperative program with the Pennsylvania State University (PSU) or Youngstown State University (YSU), the pre-engineering student undertakes a three-year curriculum in liberal studies and natural sciences (physics, mathematics, chemistry, geology) at SRU and a two-year engineering curriculum at PSU or YSU. A student recommended for transfer by SRU's Department of Physics will be able to enter any one of the following areas of study at PSU:

Aerospace Engineering
Agricultural and Biological Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Engineering Science
Geo-Environmental Engineering
Industrial Engineering
Material Science and Engineering
Mechanical Engineering
Mining Engineering
Nuclear Engineering
Petroleum and Natural Gas Engineering
and at YSU:
Chemical Engineering
Civil \& Environmental Engineering
Electrical \& Computer Engineering
Engineering Technology (Civil \& Construction, Electrical, Mechanical)
Industrial \& Systems Engineering
Mechanical Engineering
The cooperative program is an effort to fulfill the following objectives:

1. To cooperatively provide a general education in liberal arts and sciences, as well as engineering education for each student enrolled so that through five years of study a student may complete what otherwise could require six or more years.
2. To provide a student who has not yet decided between engineering and other disciplines, additional time to make that decision while the student studies both arts and sciences during the first three years at Slippery Rock University.
3. To enable qualified students to receive both a liberal and technical education at relatively low cost and, in doing so, provide the commonwealth and the nation with more broadly educated engineers.

## Requirements for the Major - Credits: 61

## Specialization: Pre-engineering

## Required Courses:

(PHYS 315 is not required of chemical engineering, electrical engineering, material science and engineering, nuclear engineering, and petroleum and natural gas engineering students. All other students must choose an alternative course from the list of pre-engineering electives if PHYS 315 is not taken. Physics 411 is only required of students intending to enroll in aerospace, computer, electrical, or nuclear engineering. All other students must choose an alternate course from the list of pre-engineering electives if PHYS 411 is not taken.)

- PHYS 140 - Engineering Graphics I Credits: 2
- PHYS 141 - Engineering Graphics II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 212 - General Physics II Credits: 4
- PHYS 213-General Physics III Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 315 - Engineering Mechanics II: Dynamics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3


## Related Field Work

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (Chemical Engineers Only)
- CHEM 202-Organic Chemistry II Credits: 3 (Chemical Engineers Only)
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 301 - Differential Equations I Credits: 3


## Engineering Electives

( 3 credit hours absolute minimum. Two additional courses must be taken if PHYS 315 and PHYS 411 are not taken.)

- Language Courses 101 and/or 102 (Language courses are optional, but may be taken in lieu of other engineering elective courses)
- CPSC (additional upper-division course)
- Independent Study (Restricted to topics in physics and computer science)
- EGEO 101 - Physical Geology Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 102 - Historical Geology Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 111 - Physical Geology Lab Credits: 1
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 112 - Historical Geology Lab Credits: 1
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 201 - Earth Materials Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 327-Structural Geolgoy Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 360 - Introduction to Hydrology Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- ENGL 205-Technical and Scientific Writing Credits: 3
(Prerequisite: English 103)
- MATH 315 - Numerical Mathematics Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3
(Required for mechanical engineers)
- PHYS 325-Analog \& Digital Electronics Credits: 3
- PHYS 371 - Physical Optics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 480 - Quantum Credits: 3
- PHYS/CHEM 301 - Physical Chemistry I Credits: 3


## Liberal Studies Requirements - Credits: 38

- Basic Requirements
- The Arts
- Global Community (An economics course is required at PSU and may be taken at SRU.)
- Human Institutions and Interpersonal Relations
- Challenges of the Modern Age (the requirements in this block were waived by the University Curriculum Committee.)


## Intensive Writing Courses

Intensive Writing Courses (Two intensive writing courses are required, but they may also count in the liberal studies blocks or major)

## Degree Completion in Five Years Physics (BA)

## (SRU Portion of $3+2$ Program)

## Freshman Year - Total Hours: 34

- Liberal Studies - Credits: 7
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 140 - Engineering Graphics I Credits: 2
- PHYS 141 - Engineering Graphics II Credits: 1
- PHYS 211-General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Sophomore Year - Total Hours: 32

- Liberal Studies - Credits: 7
- CHEM 107- General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- PHYS 212 - General Physics II Credits: 4

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 12
- PHYS Elective - Credits: 9
- MATH 301 - Differential Equations I Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3


## Senior Year - Credits from Penn State or YSU

Senior Year Credits from Penn State or YSU

## Pre-metrology

327 Vincent Science Hall
724-738-2074
Metrology is the science of measurement. Metrologists develop and evaluate calibration systems that measure characteristics of physical objects, substances, or phenomena. Quantities measured include mass, length, time, temperature, electric current, luminous intensity, and other derived units of physical or chemical measure. Metrologists also develop calibration methods and techniques based on the techniques of measurement science, technical analysis of measurement problems, and accuracy and precision requirements. Metrologists are typically employed in research laboratories, government agencies, the military, and private industry.

Slippery Rock University and Butler County Community College offer a joint cooperative program in Metrology and Physics. This cooperative program has the following major objectives.

1. To provide cooperatively a general education in a liberal arts institution, as well as technical education in a specialized school for each student enrolled so that through four years of study, a student may complete what otherwise could require five or more years.
2. To allow those qualified students to receive both a liberal and technical education at relatively low costs and, in so doing, provide the Commonwealth and the Nation with more broadly educated scientists.
Students can choose from two programs offered. Butler County Community College students enrolled in the metrology program can complete their AAS. degree and then transfer to Slippery Rock University in order to complete a BS or BA degree in physics. For the typical student, this transfer will comprise a 2-2 program, with two years spent at Butler County Community College and two years at Slippery Rock University. Students successfully completing this program will be awarded two degrees. Slippery Rock University students enrolled in the BA degree physics program can complete their undergraduate studies in the metrology program at Butler County Community College. For a typical student, this transfer will comprise a 3-1 program, with three years spent at Slippery Rock University and one year at Butler County Community College. Students successfully completing this program will be awarded two degrees: a BA in physics from Slippery Rock University and an AAS in metrology from Butler County Community College.

Specific plans of study and other metrology program details can be obtained by contacting the chair of the physics department in room 327 Vincent Science Hall.

## Teacher Certification in Chemistry

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in chemistry must earn a bachelor of arts or a bachelor of science degree in chemistry and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

## Teacher Certification in Physics

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock. Students seeking secondary school teaching certification in physics must earn a bachelor of arts or a bachelor of science degree in physics and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

## Exercise and Rehabilitative Sciences

## Chair

Patricia Pierce

## Secretary

Deborah Glenn

## Faculty

Jonathan Anning, Pamela Arnhold, Robert Arnhold, Nancy Banner, Joshua Drouin, Susan Herman, Jeffrey Lynn, Nelson Ng, Patricia Pierce, William Ryan, Bonnie Siple, Scott Zema

The increasing growth of fitness, sport, and wellness programs continues to create a need for well-trained professionals able to assume and handle multiple roles in organizations. To meet these challenging roles individuals must be trained to think critically, communicate effectively, work well as a team member, utilize the latest technologies, and be competent in their field of study.

The Department of Exercise and Rehabilitative Sciences was developed to accentuate and provide collaboration opportunities for students and faculty in three well-established programs. These distinct programs produce graduates well prepared to be successful in a highly competitive workplace. The programs include majors in athletic training and exercise science and a minor in adapted physical activity. All three programs provide extensive opportunities for handson experiences in actual worksites through internships/practica.

## Athletic Training (BS)

"The virtues of the Athletic Training Faculty, Staff, and Students constitute the confidence I now possess for personal learning and my educating of others. Slippery Rock University served as the keystone necessary for me to achieve my goals in education, clinical experience, and sport injury research."

## Anthony House, ATC '05 <br> UNLV Graduate Assistant Kinesiology/ATEP Administration

The Athletic Training Education Program (ATEP) prepares selected undergraduate students with the knowledge, skills, and abilities to provide care to athletes and the physically active within the six domains of athletic training practice. The Slippery Rock University Athletic Training Education Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Joint Review Committee on Educational Programs in Athletic Training. Students fulfilling the total 120 credit hours of academic program requirements will graduate with a bachelor of science degree in athletic training.

SRU sponsors a unique accelerated ATEP that graduates athletic training students in December of their senior (fourth) year. This is accomplished with a highly structured curriculum that is sequenced over three and a half (3.5) years or seven (7) semesters including six (6) required credits of therapeutic exercise in the summer between the student's sophomore (second) and junior (third) years. This "accelerated" program allows SRU's athletic training students to graduate a semester early, sit for the Board of Certification (BOC) credentialing examination before their peers at other universities and be more competitive for graduate assistantships, employment and seats in other medical preparation programs.

Upon formal acceptance into the professional strand of the ATEP, students must acquire and maintain athletic training student liability insurance and professional rescuer level first aid and cardiopulmonary resuscitation certifications. These are acquired in advance of enrollment in the clinical course Practicum in Athletic Training (ERS 387), which is taken four times over four consecutive semesters to total 12 credits. This is the equivalent of a 12 -credit internship. Instead of doing all coursework and then completing an internship, the athletic training student participates in his or her clinical experience under the direct supervision of an approved clinical instructor (certified athletic trainer or other medical professional) while taking the relevant coursework. Thus, there is immediate opportunity for application of theory to practice. Although most of the clinical experience takes place on-campus with SRU's certified athletic trainers and varsity athletic teams, all athletic training students are required to spend at least one rotation offcampus with one of our approved clinical instructors at an affiliate site. Athletic training students are required to provide their own transportation to and from the off-campus affiliate sites.

Athletic training students are active, dues-paying members of the SRU Athletic Training Association, National Athletic Trainers' Association (NATA), Eastern Athletic Trainers' Association (EATA), and Pennsylvania Athletic Trainers' Society (PATS). They often attend the annual conferences of those preprofessional organizations and participate in various field trips, professional medical affiliations, surgical observations, and physicians' clinics. Many athletic training students have pursued external internships with the assistance of the faculty. Some of these include internships with the Pittsburgh Steelers, Pittsburgh Pirates, New York Jets and the Wide World of Sports Complex at Disney World in Orlando, FL. Rock athletic training students are some of the most successful students in being awarded NATA and EATA sponsored scholarships.

Student-athletes participating in varsity sports sponsored by the SRU Athletic Department who are granted admission to the ATEP should make the program co-coordinators aware of their active participation in their respective sport. Although the ATEP faculty work very hard with the coaching staff to support student-athletes in their attempt to participate in varsity athletics while matriculating through the ATEP, success is dependent upon each student's ability to manage their time effectively while maintaining required standards of academic performance in the didactic (classroom) and clinical education portions of the ATEP. Because all sports are different and all sport seasons vary in time and intensity, not all student athletes will progress through the ATEP the same way. In order to meet the minimum standards of completion of the ATEP, student-athletes will be required to enroll one additional semester (4 years or 8 semesters total) or more to guarantee that a quality educational and clinical experience has been achieved and that all competencies and proficiencies have been successfully mastered.

## Additional costs related to the Athletic Training Education Program

| $\$ 200.00$ | Required/Approved Uniforms (Approximate) |
| ---: | :--- |
| 105.00 | NATA Membership Annual Dues (includes NATA, EATA \& PATS) |
| 10.00 | SRU Athletic Trainers' Association Annual Dues |
| 35.00 | Athletic Training Student Liability Insurance Annual Fee |
| 10.00 | Laboratory Fees (Approximate) |
| 10.00 | Laboratory/Class Manual Fees (Approximate) |
| 20.00 | Minimum for Transportation to off-campus clinical rotation (Cost dependent on location of assignment | [range of 3 to 22 miles from SRU], cost of gas during specific semester of off campus assignment, and opportunities to car pool.)

*All costs are subject to change

## Policy for Application to the Athletic Training Education Program

University acceptance to pursue the athletic training major does NOT guarantee admission into the professional strand of the ATEP.

## Technical Standards for the SRU Athletic Training Education Program

The ATEP at Slippery Rock University is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the ATEP establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level athletic trainer, as well as meet the expectations of the program's accrediting agency (CAAHEP). All students must meet the following abilities and expectations. In the event a student is unable to fulfill these technical standards the student will not be admitted to the program.

Compliance with the programs technical standards does not guarantee a student's eligibility for the BOC credentialing examination.

## Candidates for selection to the Athletic Training Education Program must demonstrate:

1. The mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examination using accepted techniques; and accurately, safely and efficiently use equipment and materials during assessments and the treatment of patients.
3. The ability to communicate effectively and sensitively with patients and colleagues, including individuals form different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak with English language at a level consistent with competent professional practice.
4. The ability to record the physical examination results and treatment plan clearly and accurately.
5. The capacity to maintain composure and continue to function well during periods of high stress.
6. The perseverance, diligence and commitment to complete the Athletic Training Education Program as outlined and sequenced.
7. Flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.
8. Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.
Candidates for selection to the professional strand of the ATEP will be required to verify that they understand and meet these technical standards. The Office of Diversity and Equal Opportunity will evaluate a student who states that he/she cannot meet the program's technical standards as outlined in the Office of Diversity and Equal Opportunity policies. All athletic training students will participate in an annual screening and physical to be administered by the staff at Slippery Rock University' McLaughlin Health Center prior to the start of each academic year. This will be done to ensure that each student's physical and mental health will permit him or her to meet the established technical standards.

Effective in the fall of 2005, all athletic training students enrolled in the professional strand of the major will be required by the National Collegiate Athletic Association (NCAA) to carry health insurance.

Admission into the professional strand of the ATEP is competitive. The number of seats in the program is limited because of the faculty-to-student ratio recommended for accreditation. Formal application to the professional strand of the ATEP must be completed by March of the student's freshman (first) year on campus. Formal application for admission consideration requires the following evidence:

1. Completion of ERS 107 (Introduction to Athletic Training) at Slippery Rock University with a minimum grade of "B."
2. A cumulative QPA of 2.750 or above in athletic training major courses and overall.
3. Completion of 50 hours of athletic training observation under a BOC certified athletic trainer (these 50 hours may be accumulated with the start of the fall semester of the student's first year on campus). The 50 hours must also be verified by the supervising ATC being observed. Licensed physical therapists that also hold the ATC credential may be observed as well.
4. Active membership in the Slippery Rock University Athletic Training Association.
5. Letter of application/intent, resume, and SRU transcript.
6. Letter of recommendation from the BOC certified athletic trainer who supervised the athletic training observation.
7. A 500 -word essay explaining "Why I want to become an athletic trainer."

Applicants will be ranked on the basis of QPA. Top ranked applicants will be scheduled for a personal interview. Final admission decisions will be made on the basis of academic, personal, and professional qualifications as evidenced by the student's application materials and interview responses. Students will be notified of admission decisions by the end of the freshman (first) year. Because the number of applicants may exceed the available seats, meeting the minimum criteria does not guarantee acceptance into the program. Students who have been selected for admission to the ATEP officially begin the professional strand of the major during the sophomore (second) year.

## Policy for Retention in the Athletic Training Program

Students who are accepted into the professional strand of the ATEP are required to satisfy didactic (classroom) and clinical education requirements throughout their remaining semesters in the program. Failure to maintain the minimum requirements for didactic and clinical education will result in probation. If the deficiencies are not corrected to the satisfaction of the faculty by the end of the probationary period, the student will be permanently suspended form the program. Upon recommendation of the faculty, students achieving compliance with the minimum standards following a probationary status will be permitted to complete the ATEP, which may require additional semesters.

## Board of Certification Credentialing Examination

Athletic training students who successfully complete all of the program requirements and receive the ATEP cocoordinator's endorsement are eligible to take the BOC credentialing examination administered by the BOC. Slippery Rock University graduates obtaining BOC certification are eligible for state licensure by the Pennsylvania State Boards of Medicine and Osteopathic Medicine.

## Transfer Students and Upperclassmen

The Athletic Training Education Program requires 3.5 full years (seven semesters and one summer) of coursework and a clinical experience in a structured and sequenced curriculum. Due to this rigorous program, transfer students and upperclassmen declaring a major in athletic training are placed at the freshman level. As required for all other ATEP students, transfer students and upperclassmen must complete the above application process and coursework.

## Requirements for the Major - Credits: 63

- ERS 107 - Introduction to Athletic Training Credits: 3
- ERS 217 - Care and Prevention of Athletic Injuries Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 277 - Integrative Approach to Athletic Training Credits: 3 (taken two times)
- ERS 317 - Therapeutic Modalities Theory Credits: 3
- ERS 327 - Therapeutic Modalities Procedures Credits: 3
- ERS 337 - Physical Examination of the Athlete Credits: 3
- ERS 347-Theory of Therapeutic Techniques in Rehabilitation Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 357 - Application of Therapeutic Techniques Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(taken 4 times)
- ERS 407 - Advanced Studies in Current Strategies in Athletic Training Credits: 3
- ERS 427 - Mastery in Athletic Training Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3


## Requirements Under Liberal Studies - Credits: 21

- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- CDEV 248 - Human Development and Education Credits: 3
- HSAF 101 - Personal Health Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3


## Degree Completion in 3.5 Years Athletic Training (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 34

- Liberal Studies/Electives - Credits: 16
- CDEV 248 - Human Development and Education Credits: 3
- ERS 107 - Introduction to Athletic Training Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- HSAF 101 - Personal Health Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ERS 217 - Care and Prevention of Athletic Injuries Credits: 3
- ERS 277 - Integrative Approach to Athletic Training Credits: 3 (1 and 2)
- ERS 337 - Physical Examination of the Athlete Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(1)


## Summer - Total Hours: 6

- ERS 347 - Theory of Therapeutic Techniques in Rehabilitation Credits: 3
- ERS 357 - Application of Therapeutic Techniques Credits: 3


## Junior Year - Total Hours: 35

- Liberal Studies/Electives - Credits: 8
- ERS 317 - Therapeutic Modalities Theory Credits: 3
- ERS 327-Therapeutic Modalities Procedures Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3 (2 and 3)
- ERS 407 - Advanced Studies in Current Strategies in Athletic Training Credits: 3
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3


## Senior Year - Total Hours: 15

- Liberal Studies/Electives - Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(4)
- ERS 427 - Mastery in Athletic Training Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3


## Exercise Science (BS)

"My educational experience in the Exercise Science program has been one of positive influences and excellent mentoring. This positive environment motivated me to pursue my master's degree here at SRU."

Dennis Bowers' 02<br>Slippery Rock University Graduate Student

The Exercise Science program is the first to be nationally accredited by the American Society of Exercise Physiologists. In addition, the curriculum is endorsed by the American College of Sports Medicine and the National Strength and Conditioning Association. This major is designed to prepare students to serve as fitness/exercise specialists in a variety of physical fitness/health promotion programs. The theoretical coursework is concentrated in the areas of exercise physiology, physical fitness assessment and fitness/wellness programming. These specialized courses are supplemented by foundation courses selected from the natural and behavioral sciences. Practical application and experience is provided through fieldwork at the Russell Wright Fitness Center, located on the campus of Slippery Rock University. The culminating experience is a full-time (12-credit) internship in one of approximately 75 quality programs, which have cooperative agreements with the university. The internship sites are selected through careful advisement to provide the best possible experiences for students in either corporate, hospital, commercial or community settings. Furthermore, students have the opportunity to attend regional and national professional meetings, be active participants in the Exercise Science Society, and assist faculty in research projects and activities.

Employment opportunities are available in YMCA's, corporate fitness and health promotion programs, wellness centers, health spas and fitness clubs and various clinical and rehabilitative centers.

## Policy for Admission into the Exercise Science Major

University acceptance to pursue the Exercise Science major does not guarantee admission into the exercise science program. Formal application to the Exercise Science major must be completed by the student according to the following procedures:

1. It is the student's responsibility to submit an Application to the Major form to the Exercise and Rehabilitative Sciences Department Chair's Office ( 115 West Gym) during the semester in which he/she is enrolled and would earn a total of 48 credit hours.
2. The application must be submitted by December 1st in the fall and May 1st in the spring.
3. Entering transfers from other universities with earned credits beyond 48 hours have a one-semester grace period.
4. On or before the beginning of the following semester students will receive notification of acceptance or denial to the major according to the following:
a. Acceptance

The student has fulfilled all major requirements listed on the Degree Audit Report (DARS) in the section "Prerequisites For Admission to Exercise Science Program" and has an overall and major QPA of 2.75 or higher. Once the student has been accepted into the Exercise Science major, it will take the student at least three semesters to complete the curriculum plus a 12-credit internship.
b. First Denial

Not fulfilling the requirements as stated above will result in a first denial. Failure to submit an application will also result in a first denial. Students who are denied for the first time are not permitted to take upper level Exercise Science coded courses. Students must reapply for a second time the following semester.
c. Second Denial

If students do not meet the requirements again, they are denied the second time. Failure to submit an application will also result in a second denial. In the case of a second denial, students are not retained in the major and their major is changed to Exploratory. Students are not permitted to reapply to the Exercise Science major for one year following a second denial. If after one year the student has an overall QPA of 2.75 , he/she may reapply and repeat the application process as stated previously.

## Policy for Retention in the Exercise Science Major

Students who are admitted into the program must maintain a major and overall QPA of 2.75 or higher. Students are not permitted to do their internships unless they have met QPA standards. Failure to maintain academic standards will result in a one-semester probation in which the student must remedy QPA deficiencies. If the necessary QPA requirements are not attained after one semester of probation, the student will be removed from the program.

## Policy for Changing to the Exercise Science Major

Any student changing their major to Exercise Science must have an overall QPA of 2.75 or higher.

## Requirements for the Major - Credits: 60

## Required Courses

## Exercise Science Core Courses - Credits: 21

- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3

Specialization Area Courses - Credits: 30

- ERS 450 - Exercise Science Internship Credits: 12
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3

Liberal Studies Courses - Credits: 9

- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3


## Degree Completion in 4 Years Exercise Science (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 32

- Liberal Studies/Electives - Credits: 20
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 15
- BIOL 216 - Anatomy and Physiology Credits: 3 or
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 12
- BIOL 216 - Anatomy and Physiology Credits: 3
or
- BIOL 217 - Anatomy and Physiology Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3


## Senior Year - Total Hours: 28

- Liberal Studies/Electives - Credits: 4
- ERS 450 - Exercise Science Internship Credits: 12
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3


## Minor in Adapted Physical Activity

"I cannot imagine the last four years of my life without the incredible experiences
of this minor. Not only was it an incredible learning experience; but it was an unforgettable experience of what it means to touch peoples' lives and be touched back in the best possible way and that is through the heart."

## Marla Aron '02

The Adapted Physical Activity program is a minor designed to prepare students in exercise science, teacher education, therapeutic recreation, and athletic training programs to assess, develop, implement, and evaluate programs of physical education and fitness exercise for individuals with disabilities. The Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) are two federal laws that provide access and education to all walks of life for people with disabilities. This will result in an increase of participation and subsequent knowledge for planning appropriate programs for individuals with disabilities.

Employers in school districts, fitness agencies, and sport organizations are actively recruiting individuals with experience working with people with disabilities. Graduates of the program have been extremely successful securing jobs in their chosen fields or receiving acceptance into graduate programs in adapted physical activity, physical therapy, or other related professions.

Students will acquire knowledge and skills through a comprehensive program of class and practical experiences in this 27 -credit program. Students can also take advantage of participating in state and national conferences, developing grant writing skills and supervisory roles in one or more of the community service-learning practical programs.

## Requirements for the Minor in Adapted Physical Activity and Rehabilitation

## Theory Core Courses - Credits: 27

- ERS 165 - Introduction to Equine Facilitated Riding Credits: 3
- ERS 261 - Adapted Aquatics Credits: 3
- ERS 265 - Sport and Disability Credits: 3
- ERS 275 - Introduction to Adapted Physical Activity Credits: 3
- ERS 285 - Adapted and Therapeutic Exercise Credits: 3
- ERS 358 - Assessment Techniques in Adapted Physical Activity Credits: 3
- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 465 - Program Design in Adapted Physical Activity Credits: 3
- ERS 466 - Professional Affiliation in Adapted Physical Activity Credits: 3


# Geography, Geology, and the Environment 

107 Spotts World Culture

724-738-2048

## Chair

James Hathaway
Secretary
Bonnie Vinton

## Faculty

Abigail Amissah-Arthur, Patrick Burkhart, Patricia Campbell, Xianfeng Chen, James Hathaway, Jack Livingston, Carolyn Prorok, Tamra Schiappa, Langdon Smith, Julie Snow, Michael Stapleton, Jialing Wang, Michael Zieg

The Department of Geography, Geology, and the Environment offers a variety of field work-based perspectives on the study of the earth and people's relation to it. Students can focus on the physical nature of the earth, on the nature of places on the earth's surface, or on the geographic study of economic, political, and cultural processes. Or students may take a more interdisciplinary approach and integrate knowledge from many disciplines in the study of environmental issues.

## Environmental Geoscience (BA)

The environmental geoscience (BA) focuses on providing students with a scientific understanding of the Earth and surrounding environment. The student in geology gains an understanding of the various terrestrial processes and features (mountains, oceans, volcanoes, glaciers); the immenseness of geologic time, the history of the earth and organisms that inhabit it (fossils); the role of water, fuel, and mineral resources in the development of civilization; and the close interaction between the geologic and organic environments.

Students who desire to combine interests in geology and other fields such as education, business, recreation, environmental sciences, or language may prefer the environmental geoscience (BA) because its relatively small number of courses allows students to take a second major or minor in another field.

## Requirements for the Major - Credits: 39

## Required Courses - Credits: 22

- EGEO 100 - Environmental Geology Credits: 3
or
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 110 - Environmental Geology Lab Credits: 1 or
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- EGEO 271-Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 281- Quantitative Methods Credits: 2

Electives - Credits: 13
any EGEO course above 200

- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3
- MARS 362 - Marine Geology Credits: 3

Related Courses - Credits: 4

- CHEM 108 - General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1


## Degree Completion in Four Years Environmental Geoscience (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 12
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- EGEO 100 - Environmental Geology Credits: 3 or
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 110 - Environmental Geology Lab Credits: 1 or
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 3
- Language 101 - Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- MATH 125 - Precalculus Credits: 4
or
- MATH 225 - Calculus I Credits: 4
- PHYS 201 - Elements of Physics I Credits: 3 or
- PHYS 211 - General Physics I Credits: 4


## Junior Year - Total Hours: 30

- Language 102 - Credits: 3
- Language 103 - Credits: 3
- Major ELEC - Credits: 3 (select from list)
- Liberal Studies - Credits: 15
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- ENGL 210 - Interpreting Literature Credits: 3


## Senior Year - Total Hours: 30

- Major ELEC - Credits: 10 (select from list)
- Liberal Studies/Electives - Credits: 18
- EGEO 281 - Quantitative Methods Credits: 2


## Environmental Geoscience (BS) - Track in Environmental Science

## Coordinator

Michael Stapleton
Environmental science is the integration of scientific knowledge from many disciplines in order to understand the interrelationships between human activities and the environment. Environmental science majors are exposed to the general principles of biology, chemistry, geology, meteorology, and physics. Thus, it is not a focus on one of these disciplines, but involves all of them and their interaction within environmental systems.

Environmental science majors could enter several general fields:

- Industry and Consulting, monitoring and investigating the contamination of the air, land and water. Responsibilities could range from working to reduce potential environmental contamination in an industrial setting, to remediating contamination that resulted from past disposal practices.
- Local, State, or Federal Environmental Agencies, working to monitor, enforce, and develop environmental policy and regulations.
- Environmental Research, working to understand and solve environmental problems. Students would continue their education in a graduate program focusing on an area of interest to them.
The program takes four years of full time study to complete. Students with associate degrees and transfer students are welcome and could complete the program in less time based upon their prior classes taken. The program is rich in laboratory and field experiences that support our lecture classes. Students gain important practical experience working in the field studying environmental systems and problems. In addition, students are required to complete an approved internship or research project. We train our students not only with a liberal arts education and a broad-based scientific
background, but with the skills that will enable them to succeed in a competitive work force. The department encourages undergraduate student research. Opportunities abound for students to work directly with the faculty on independent research projects.

ENVS 450 or 480 must be completed during the summer after your Junior or Senior year.

## Requirements for the Major - Credits: 60

## Required Core Courses - Credits: 33

- BIOL 357 - Environmental Microbiology Credits: 4
- BIOL 401 - Ecology Credits: 3
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 451 - Geochemistry Credits: 4
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Elective Major Courses - Credits: 8

- MARS Summer Course
- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3
- CHEM 240 - Industrial Hygiene Credits: 3
- CHEM 340-Air Quality Assessment Credits: 4
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 430 - Industrial Pollution Control Engineering Credits: 3
- EGEO 231-Aerial Photography Interpretation Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 328 - Plate Tectonics Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 453 - Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3
- ENVS 450 - Environmental Science Internship Credits: 3 to 12
- ENVS 480 - Environmental Systems Analysis Credits: 3


## Other Required Courses - Credits: 16

- BIOL 101 - General Biology Credits: 3
- BIOL 325 - Biometry Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- PHYS 213 - General Physics III Credits: 3


## Degree Completion in Four Years Environmental Science (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- Liberal Studies - Credits: 3
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 225 - Calculus I Credits: 4

Sophomore Year - Total Hours: 28

- Liberal Studies - Credits: 3
- BIOL 101 - General Biology Credits: 3
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- COMM 200 - Public Speaking Credits: 3
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 32

- Major Elective - Credits: 3
- Liberal Studies/Electives - Credits: 16
- BIOL 325 - Biometry Credits: 3
- BIOL 357 - Environmental Microbiology Credits: 4
- BIOL 401 - Ecology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3


## Senior Year - Total Hours: 31

- Major Electives - Credits: 5
- Liberal Studies/Electives - Credits: 14
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 451 - Geochemistry Credits: 4
- ENVS 450 - Environmental Science Internship Credits: 3 to 12
or
- ENVS 480 - Environmental Systems Analysis Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Environmental Geoscience (BS) - Track in Geology

The environmental geoscience (BS) track in geology focuses on providing students with a scientific understanding of the Earth and surrounding environment. The student in geology gains an understanding of the various terrestrial processes and features (mountains, oceans, volcanoes, glaciers); the immenseness of geologic time, the history of the earth and organisms that inhabit it (fossils); the role of water, fuel, and mineral resources in the development of civilization; and the close interaction between the geologic and organic environments.

Demand for the professional geologist comes from the needs of engineering, hydrogeologic and environmental firms; geological surveys; oil, gas and mining companies; state and national parks; museums; conservation agencies; planning commissions; and teaching institutions. A student who completes a bachelor of science in geology will have the basis for entry to graduate schools or for employment as a geologist.

## Requirements for the Major - Credits: 59

## Required Core Courses - Credits: 32

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 103/303 - Concepts of Evolution and the Fossil Record Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 304 - Paleontology Laboratory Credits: 1
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 351 - Mineralogy Credits: 4
- EGEO 352 - Petrology Credits: 4
- EGEO 362 - Stratigraphy Credits: 3
- EGEO 482 - Senior Seminar Credits: 1


## Elective Major Courses - Credits: 9

- EGEO 241 - Geomorphology Credits: 3
- EGEO 242 - Glacial Geology Credits: 3
- EGEO 323 - Planetary Geology Credits: 3
- EGEO 328 - Plate Tectonics Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 451 - Geochemistry Credits: 4
- EGEO 453-Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- EGEO 498 - Selected Topics Credits: 1 to 3


## Required Field Camp - Credits: 4

At an acceptable field station.
Other Required Courses - Credits: 14

- CHEM 108 - General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 or
- G\&ES 410 - Remote Sensing Credits: 3
- MATH 230 - Calculus II Credits: 4
- PHYS 212 - General Physics II Credits: 4 or
- PHYS 213 - General Physics III Credits: 3


## Degree Completion in Four Years Environmental Geosciences (BS) - Track in Geology

## Completion Hours: 120

Freshman Year - Total Hours: 28

- Liberal Studies Credits: 6
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies/Elective Credits: 9
- COMM 200 - Public Speaking Credits: 3
- EGEO 103/303 - Concepts of Evolution and the Fossil Record Credits: 3
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 304 - Paleontology Laboratory Credits: 1
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4

Junior Year - Total Hours: 30

- Liberal Studies Credits: 9
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 351 - Mineralogy Credits: 4
- EGEO 352 - Petrology Credits: 4
- EGEO 362 - Stratigraphy Credits: 3
- MATH 230 - Calculus II Credits: 4
- PHYS 212 - General Physics II Credits: 4 or
- PHYS 213-General Physics III Credits: 3

Senior Year - Total Hours: 32

- Major Electives - Credits: 9
- Liberal Studies/Electives - Credits: 13
- Field Camp - Credits: 4
- EGEO 281- Quantitative Methods Credits: 2
- EGEO 482 - Senior Seminar Credits: 1
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
or
- G\&ES 410 - Remote Sensing Credits: 3


## Geography (BA)

Students in the BA Geography program study the links between human beings and their environment as well as the links between one area of the earth's surface with another. The geography BA student investigates the nature of places on the earth's surface as well as the geographic study of environmental, economic, cultural, and political processes. This program emphasizes the collection, analysis, and representation of earth data at scales ranging from the local to the global. Opportunities abound for students to engage in fieldwork, internships, and in the production of
research in our department. If you enjoy learning about the Earth and its peoples and landscapes, either in your back yard or far away, please consider the opportunities our program provides.

The geography BA program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; and the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include: federal state, regional, and local government; National Park Service, Peace Corps, real estate developers, companies dealing with insurance, transportation, communications, and international trade, scientific and research groups, and museums.

## Requirements for the Major - Credits: 37

## Specialization: Liberal Arts Geography

## Core Courses - Credits: 15

- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 302-Cultural Geography Credits: 3
- G\&ES 331 - Economic Geography Credits: 3
- G\&ES 444 - Philosophy of Geography Credits: 3
- G\&ES 489 - Field Studies Credits: 3


## Regional Courses (Select 9 Credits from the Following)

- G\&ES 107 - Environments and Peoples of the Developed World Credits: 3
or
- G\&ES 109 - Environments and Peoples of the Developing World Credits: 3
- G\&ES 201 - Latin America and the Caribbean Credits: 3 or
- G\&ES 202 - United States and Canada Credits: 3 or
- G\&ES 204 - Post-Soviet Union Credits: 3
- G\&ES 303-Asia Credits: 3
or
- G\&ES 308 - Europe Credits: 3


## Technique Courses - Credits: 7 - Two Required and One Elective

- G\&ES 115 - Map Reading and Interpretation Credits: 1
- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
or
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3


## Degree Completion in Four Years Geography (BA)

Completion Hours: 120

## Freshman Year - Total Hours: 28

- Liberal Studies - Credits: 15
- G\&ES Regional 1xx - Credits: 3 (* see footnote)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 115-Map Reading and Interpretation Credits: 1 (* see footnote)
- G\&ES 150 - The Natural Environment Credits: 3
(* see footnote)
Sophomore Year - Total Hours: 32
- G\&ES Regional 2xx - Credits: 3 (* see footnote)
- Language 101 - Credits: 3 (* see footnote)
- Language 102 - Credits: 3
- (* see footnote)
- Liberal Studies - Credits: 14
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 220-General Methods of Fieldwork Credits: 3 (* see fotenote)

Junior Year - Total Hours: 28

- G\&ES Regional 3xx - Credits: 3
( $*$ see footnote)
- Language 103 - Credits: 3 (* see footnote)
- G\&ES Elective 1 - Credits: 3 (* see footnote)
- Liberal Studies/Elective - Credits: 13
- G\&ES 302 - Cultural Geography Credits: 3
(* see footnote)
- G\&ES 315 - Cartography I Credits: 3
(* see footnote)
or
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
(* see footnote)


## Senior Year - Total Hours: 32

- G\&ES Elective 2 - Credits: 3 (* see footnote)
- Liberal Studies/Electives - Credits: 20
- G\&ES 331 - Economic Geography Credits: 3 (* see fotenote)
- G\&ES 444 - Philosophy of Geography Credits: 3
(* see footnote)
- G\&ES 489 - Field Studies Credits: 3 (* see footnote)


## Footnote

* Indicates course in major.


## Geography (BS) - Track in Environmental Studies

## Coordinator

Jack Livingston
Students in the environmental studies program study the links between human beings and their environment. This program takes an interdisciplinary approach and integrates knowledge from the social and natural sciences in the study of environmental issues. An important goal of the program is for students to understand the relationships that exist between social, behavioral, and environmental systems. We emphasize the collection, analysis, and representation of earth data at scales ranging from the local to the global. Toward the end of their studies, students identify a research problem, gather and analyze data, and prepare a formal paper and presentation on their topic. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department.

The environmental studies program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector.
Representative employment areas for our graduates include environmental consulting, pollution remediation, environmental law or public policy, outdoor education, resource management, geographic information systems analysis, nonprofit environmental organizations, and planning.

## Requirements for the Major - Credits: 55

## Required Core Courses - Credits: 15

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 235 - Conservation Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3
- G\&ES 489 - Field Studies Credits: 3

Techniques Core - Credits: 10

- G\&ES 115-Map Reading and Interpretation Credits: 1
- G\&ES 220-General Methods of Fieldwork Credits: 3
- G\&ES 315-Cartography I Credits: 3
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3


## Social Science Core Courses - Credits: 6

- ECON 315 - Environmental Economics Credits: 3
or
- G\&ES 331 - Economic Geography Credits: 3
- PHIL 324 - Environmental Ethics Credits: 3


## Natural Science Core Courses - Credits: 9

Please choose three of the courses below:

- BIOL 105 - Environmental Biology Credits: 3
- CHEM 107- General Chemistry I Credits: 3
- EGEO 100 - Environmental Geology Credits: 3
- PHYS 204 - Environmental Biophysics Credits: 3


## Research Skills - Credits: 3

Please choose one of the courses below:

- BIOL 325 - Biometry Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Environmental Studies Electives - Credits: 12

Choose four classes:

- BIOL 120 - Practical Botany Credits: 3
- BIOL 207 - Land Plants and Their Environment Credits: 3
- BIOL 208 - Introduction to Wildlife Management Credits: 3
- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3 (* See footnote)
- CHEM 270 - Industrial Chemistry Credits: 3 (* See footnote)
- CHEM 340-Air Quality Assessment Credits: 4 (* See footnote)
- CHEM 370 - Water Quality Assessment Credits: 4
(* See footnote)
- ECON 315 - Environmental Economics Credits: 3
(* See footnote)
- EGEO 121 - Meteorology Credits: 3
- EGEO 131 - Oceanography Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 340-Air Pollution Meteorology Credits: 3 (* See footnote)
- EGEO 451-Geochemistry Credits: 4 (* See footnote)
- ENGL 205-Technical and Scientific Writing Credits: 3 (* See footnote)
- ENGL 410 - Literature of the Environment Credits: 3
- G\&ES 215 - Rural and Urban Planning Credits: 3
- G\&ES 244 - Environmental Justice Credits: 3
- G\&ES 245 - Population and Resources Credits: 3
- G\&ES 255 - General Climatology Credits: 3 (* See footnote)
- G\&ES 331 - Economic Geography Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 318 - Principles of Industrial Hygiene Credits: 3 (* See footnote)
- HSAF 348 - Hazardous Materials and Waste Management Credits: 3
- POLS 200 - State and Local Government Credits: 3
- PREE 213 - Environmental Resource Analysis Credits: 3 (* See footnote)
- PREE 412 - Open Space Planning Credits: 3


## Footnotes

* Check course prerequisite(s)

Environmental Studies students are required to perform 100 service-learning hours of their choosing.

## Degree Completion in Four Years Geography (BS)- Track in Environmental Studies

Completion Hours: 120

## Freshman Year - Total Hours: 31

- Science Core (2) Credits: 6
(* See foonote)
- Liberal Studies/Electives Credits: 12
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 115-Map Reading and Interpretation Credits: 1
(* See foonote)
- G\&ES 135- Introduction to Environmental Problems Credits: 3 (* See foonote)
- G\&ES 150 - The Natural Environment Credits: 3
(* See foonote)


## Sophomore Year - Total Hours: 30

- Science Core Credits: 3 (* See footnote)
- ECON 202 (LS) Credits: 3
- Liberal Studies/Electives Credits: 12
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 220-General Methods of Fieldwork Credits: 3
(* See footnote)
- G\&ES 235 - Conservation Credits: 3 (* See footnote)


## Junior Year - Total Hours: 29

- Statistics Elective Credits: 3
(* See foonote)
- Major Electives (2) Credits: 6 (* See foonote)
- Liberal Studies/Electives Credits: 11
- ECON 315 - Environmental Economics Credits: 3
(* See footnote) or G\&ES 331
- G\&ES 315-Cartography I Credits: 3 (* See footnote)
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 (* See footnote)
- G\&ES 331 - Economic Geography Credits: 3 or ECON 315

Senior Year - Total Hours: 30

- Major Electives (2) Credits: 6 (* See footnotes)
- Electives (Minor) Credits: 12
- Liberal Studies/Electives Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3 (* See footnote)
- G\&ES 489 - Field Studies Credits: 3 (* See footnote)
- PHIL 324 - Environmental Ethics Credits: 3


## Footnotes

* Indicates course in major.


# Geography (BS)-Track in Applied Geographic Technology 

Students in the Applied Geographic Technology geography program study the links between human beings and their environment as well as the links between one area of the earth's surface with another. This program is designed to prepare students for employment in technical occupations, planning, or postgraduate studies. The applied geographic technology student investigates the geographic study of environmental, economic, cultural, and political processes and becomes proficient in the fast growing field of geographic information technology. This program emphasizes the collection, analysis, and representation of earth data at scales ranging from the local to the global. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department. If you enjoy learning about the Earth and its peoples and landscapes, either in your back yard or far away, please consider the opportunities our program provides.

The Applied Geographic Technology program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; and the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include environmental consulting, pollution remediation, environmental law or public policy, outdoor education, resource management, geographic information systems analysis, nonprofit environmental organizations, and planning.

## Requirements for the Major - Credits: 55

## Specialization: Applied Geographic Technology

Core Courses - Credits: 27

- G\&ES 100 - Discover Geography Credits: 3
- G\&ES 135-Introduction to Environmental Problems Credits: 3
- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 215 - Rural and Urban Planning Credits: 3
- G\&ES 235-Conservation Credits: 3
- G\&ES 302 - Cultural Geography Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3
- G\&ES 331 - Economic Geography Credits: 3
- G\&ES 489 - Field Studies Credits: 3


## Technique Courses - Credits: 13

- G\&ES 115 - Map Reading and Interpretation Credits: 1
- G\&ES 220-General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3


## Technique Electives (Select 6 Credits)

- G\&ES 410 - Remote Sensing Credits: 3 or
- G\&ES 415 - Cartography II Credits: 3 or
- PREE 412 - Open Space Planning Credits: 3


## Regional Elective (Select 3 Credits)

- G\&ES 201 - Latin America and the Caribbean Credits: 3
- G\&ES 202 - United States and Canada Credits: 3
- G\&ES 204 - Post-Soviet Union Credits: 3
- G\&ES 303 - Asia Credits: 3
- G\&ES 308 - Europe Credits: 3
- G\&ES 309 - Africa Credits: 3


## Technical Communication - Credits: 3

- ENGL 205-Technical and Scientific Writing Credits: 3


## Elective G\&ES Course - Credits: 3

(select 3 credits at the 200 level or above)

## Degree Completion in Four Years Applied Geographic Technology (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 28

- Liberal Studies - Credits: 12
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3 (* see footnote)
- G\&ES 115 - Map Reading and Interpretation Credits: 1
(* see footnote)
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
(* see footnote)
- G\&ES 150 - The Natural Environment Credits: 3
(* see footnote)

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 215-Rural and Urban Planning Credits: 3 (* see footnote)
- G\&ES 220 - General Methods of Fieldwork Credits: 3 (* see footnote)
- G\&ES 235-Conservation Credits: 3 (* see footnote)


## Junior Year - Total Hours: 31

- G\&ES Regional - Credits: 3 (* see footnote)
- Liberal Studies/Electives - Credits: 13
- ENGL 205-Technical and Scientific Writing Credits: 3 (* see footnote)
- G\&ES 302-Cultural Geography Credits: 3 (* see footnote)
- G\&ES 315 - Cartography I Credits: 3 (* see footnote)
- G\&ES 324 - Environmental Law and Policy Credits: 3 (* see footnote)
- G\&ES 325-Introduction to Geographic Information Systems Credits: 3 (* see footnote)


## Senior Year - Total Hours: 31

- G\&ES Techniques Elective - Credits: 6 (* see footnote)
- G\&ES Elective - Credits: 3 (* see footnote)
- Liberal Studies/Electives - Credits: 13
- G\&ES 331 - Economic Geography Credits: 3
(* see footnote)
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3 (* see fotenote)
- G\&ES 489 - Field Studies Credits: 3 (* see footnote)


## Footnote

* Indicates course in major.


## Minor in Environmental Science

## Requirements for the Minor

## Required Courses - Credits: 24

Of the required and elective courses listed, no more than six credit hours may be counted toward both the environmental science minor and a major.

Environmental Science Core - Credits: 9

- BIOL 100 - Introductory Biology Laboratory Credits: 1
- BIOL 101 - General Biology Credits: 3
- EGEO 121 - Meteorology Credits: 3


## Elective Courses - Credits: 15

At least six credits are to be at the 300 or higher level

- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3
- BIOL 401 - Ecology Credits: 3
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- CHEM 240 - Industrial Hygiene Credits: 3
- CHEM 270 - Industrial Chemistry Credits: 3
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 430 - Industrial Pollution Control Engineering Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 231 - Aerial Photography Interpretation Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 451-Geochemistry Credits: 4
- EGEO 453-Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Minor in Geographic Information Technology

## Requirements for the Minor

## Required Courses - Credits: 21

- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3 (* see footnote)
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
(* see footnote)
- G\&ES 410 - Remote Sensing Credits: 3
- G\&ES 415 - Cartography II Credits: 3
(* see footnote)
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3 (* see footnote)
- G\&ES 450 - Internship Credits: Variable


## Footnote

* Check prerequisite


## Minor in Geography

## Requirements for the Minor

Required Courses - Credits: 21
Group I: (Select 6 Credits)

- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 302-Cultural Geography Credits: 3
- G\&ES 331 - Economic Geography Credits: 3


## Group II: (Select 3 Credits)

- G\&ES 202 - United States and Canada Credits: 3
- G\&ES 301-Geography of Rural Areas Credits: 3

Group III: (Select 3 Credits)

- G\&ES 220-General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3

Electives: - Credits: 9

Any three G\&ES courses at the 200 level or above.

## Minor in Geology

## Requirements for the Minor

Electives should be chosen only after consultation with the academic advisor. No more than six semester credits may count toward both a major and the geology minor.

## Required Courses - Credits: 19

Geology Core - Credits: 10

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 271-Geotechniques: Lab Credits: 2

Geology electives - Credits: 9 minimum

- a. At least three credits of geology courses at a level of 200 or higher.
- b. At least six credits of geology courses at a level of 300 or higher.


## Minor in Meteorology

## Requirements for the Minor - Credits: 18

No more than six semester credits may count toward both a major and the meteorology minor. Internship is arranged at a national weather service or other professional office. Students will be working with professional weather forecasters.

Geology Core - Credits: 12

- EGEO 121 - Meteorology Credits: 3
- EGEO 221 - Weather and Climate Forecasting Credits: 3
- EGEO 450 - Internship Credits: 3 to 12


## Elective Courses - Credits: 6

- EGEO 251 - Aviation Meteorology Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3


## Teacher Certification in Earth and Space Science

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in earth and space science must earn a bachelor of arts or a bachelor of science degree in geology and contact the Department of Secondary Education/Foundations of Education concerning its
graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the Secondary Education/Foundations of Education office in 114 McKay Education Building.

## Health and Safety

208 Strain Behavioral Science Building

724-738-2017

## Chair

Joseph Cali

## Secretary

Patti Pink

## Faculty

Joseph Cali, Wilma Cavill, Michael Cleary, Kimberly Y.Z. Forrest, Donald Gibala, Marcy Leeds, George Mihalik, Daniel Sherwin, Wendy Stuhldreher, Adelle M. Williams

The Department of Health and Safety provides a diversified curriculum which prepares students for careers in a variety of health and/or safety-related disciplines, such as gerontology, community health, and safety and environmental management. The department offers a bachelor of science with a major in health science or a major in safety and environmental management, and a certificate or minor in gerontology.

## Certificate in Gerontology

## Coordinator

Adelle Williams
"My experience with the SRU gerontology program fostered my interest in aging. The education was the key that unlocked the door to my career in gerontology."

## Michelle Zanicky Jamieson <br> December, 1992

Gerontology is an interdisciplinary specialization that focuses on aging and the aging process. This specialization is designed to enhance the understanding of aging and enrich interactions among generations. It is a valuable adjunct for those preparing to work directly with, or indirectly for, older persons. Job opportunities for students who have academic preparation in gerontology are available in community agencies servicing the older adult, long term care facilities and hospitals, senior citizen living facilities, and community recreation and senior centers. The program is open to students in any major. Students may decide to complete the requirements for a certificate in gerontology or a gerontology minor.

The Student Gerontological Society provides students with opportunities to participate in the annual campus-wide Health Fest in October, community outreach activities, and program marketing as well as attend national and regional conferences. Sigma Phi Omega, the national honorary society in gerontology, recognizes students' exemplary scholastic accomplishments in the field of aging. Undergraduate students with a QPA of 3.300 or above (on a 4.000 scale) are eligible to apply.

## Advisement

Students planning to complete the program in gerontology will declare a major within a department. Major responsibility for advisement will rest within this department. Students must assume responsibility for fulfilling all requirements for graduation.

## Requirements for the Certificate

With the assistance of an advisor from the Gerontology Program, students will select four 3-credit courses approved from the gerontology specialization and will culminate their studies with a 3-credit internship related to their area of interest.

## Courses Approved for Gerontology:

- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 476 - Physiological Aspects of Aging and Human Performance Credits: 3
- GERO 265 - Aging and the Older Person Credits: 3
- GERO 425 - Women and Aging Credits: 3
- GERO 450 - Gerontology Internship Credits: 3 to 12
- GERO 465 - Seminar in Gerontology Credits: 3
- GERO 490 - Independent Study Credits: 1 to 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 414 - Death and Dying Credits: 3
- NURS 498 - Selected Topics Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- SASW 342 - Sociology of Aging Credits: 3


## Community Health (BS)

"After my graduation from Slippery Rock University, I had no problem gaining employment. Other health professionals seemed to be very impressed with the educational background I received as a community health major. Because I am working as a health data analyst, I found my data management, biostatistics, and epidemiology courses to be most helpful. My employers were also impressed that, while at SRU, I participated in an undergraduate research project. This provided me with the opportunity to further explore and practice data analysis."

Amy Zychowski 99
Community Health is a discipline in which professionals deliver health information and programs within the community setting. Graduates of this program have a broad based background in the field of health that prepares them for entry level positions in health education, health promotion, health data management or for further graduate study in a health-related field.

Upon completion of this program our students are eligible to sit for the Certified Health Education Specialist examination, which is a national credentialing examination for people who wish to practice health education in a community (non-public school) setting. Today, the Certified Health Education Specialist credential is often preferred or even required for many health education positions. Graduates who complete our Community Health program successfully pass the Certified Health Education Specialist examination at a rate well above the national average. Recent graduates have entered positions in state and local health departments, in community based wellness programs, for voluntary health organizations such as the American Heart Association or American Cancer Society, and for federal government health programs, and health insurance companies. Graduates also enter graduate programs in physical or occupational therapy.

Students are encouraged to take additional coursework or minors in complementary areas of study such as gerontology, foreign language, psychology or business. The program culminates in a 12 -credit internship, which provides hands-on experiences and further insights into career opportunities in community health. Students may select their own internship site or may choose from a database of previously used sites. It is through this internship experience that students actually identify the branch of community health in which they would like to practice. Students are required to select a major project for their internship experience that demonstrates mastery of entry-level professional skills. Frequently interns remain at the sites as employees following their internships.

Community health faculty members have on-going research projects in which advanced level students can become involved. Students help professors analyze data and prepare professional conference presentations, which the student actually presents under the mentorship of the faculty member. Other student activities include the Pennsylvania Public Health Association Collegiate Chapter and the peer health education program run by the SRU student health service.

## Admission Criteria

Declaration of the community health major does not guarantee admission into the community health program.
To be officially admitted into the community health program, a student must attain a minimum cumulative QPA of 2.000 and a minimum QPA of 2.500 in the program courses by the end of the second semester of the sophomore year.

## Requirements for the Major - Credits: 60

## Professional Requirements

- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- CHEM 104 - Introduction Chemistry I Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 301 - Introduction to Health Education Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- HSAF 450 - Internship Credits: 12
- MATH 152 - Elementary Statistics I Credits: 3


## Internship Required:

Cumulative QPA of 2.000 and program QPA of 2.500 required for internship assignments, which are during the summer.

## Retention Criteria

Students must maintain both a 2.000 cumulative and 2.500 program QPA to be retained in the program. Students failing to meet a QPA of 2.000 cumulative and a 2.500 in the program (major) will be given one semester to meet these requirements. Students can either retake courses or take additional courses to improve their QPA. If the student is not successful in meeting the QPA requirements, the student will be removed from the program. At that point the student must select another major.

## Degree Completion in Four Years Community Health (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies Credits: 18
- CHEM 104 - Introduction Chemistry I Credits: 3
- CPSC 110 - Computer Concepts Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 301 - Introduction to Health Education Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


## Junior Year - Total Hours: 30

- Electives Credits: 9
- BIOL 210 - Medical Microbiology Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3

Senior Year - Total Hours: 30

- Electives Credits: 12
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- HSAF 450 - Internship Credits: 12


# Minor and Certificate in Health Care Informatics 

## Coordinator

Ramona Nelson
Health Care Informatics is focused on the development and application of information technology to health care information. It is an interdisciplinary program integrating health care computer and information science. Health care informatics specialists are professionals who assume direct responsibility for automated information systems within a health care context acting as a liaison between health care and computer specialists.

The Health Care Informatics program is offered in three tracts. Tract I is designed for students who are interested in health care and computers but do not have a degree in either area. Tract II is a fast tract for students with a major or degree in one of the health care fields. Tract III is a fast tract designed for students with a major or degree in computer science/information systems. Each of the three tracts is offered as an undergraduate minor or as a certificate. The certificate option is available for post-baccalaureate students who have already completed a bachelor's degree.

Healthcare informatics students will be provided advisement related to the minor or certificate program by Ramona Nelson, nursing department, or Sharadchandra Joshi, computer science department.

## Required of All Students:

All students in each tract are required to take two courses in health care informatics (NURS 311,511) and complete a 3 -credit practicum or internship capstone experience (NURS 450). In addition students must complete the requirements for their specific tract.

- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 450 - Health Care Informatics Internship Credits: 3
- NURS 511 - Advanced Healthcare Informatics Credits: 3


## Requirements for Students in Tract I

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
or
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- HSA 231 - The US Healthcare System Credits: 3
- HSA 335 - Current Topics in Health Care Credits: 3


## A Computer Science Elective Course

Select one of the following:

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 305 - Introduction to Expert Systems Credits: 3
- CPSC 413 - Systems Analysis Credits: 3


## A Health Related Elective Course

Select one of the following:

- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 422 - Nursing Research Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Requirements for Students in Tract II

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3 or
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3


## Elective Course

Select one of the following:

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 305 - Introduction to Expert Systems Credits: 3
- CPSC 413 - Systems Analysis Credits: 3


## Requirements for Students in Tract III

- AHEA 111
- AHEA 231
- HSA 335 - Current Topics in Health Care Credits: 3


## Elective Course

Select one of the following:

- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 422 - Nursing Research Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Minor in Gerontology

## Coordinator

Adelle Williams
"My experience with the SRU gerontology program fostered my interest in aging. The education was the key that unlocked the door to my career in gerontology."

Michelle Zanicky Jamieson December, 1992

Gerontology is an interdisciplinary specialization that focuses on aging and the aging process. This specialization is designed to enhance the understanding of aging and enrich interactions among generations. It is a valuable adjunct for those preparing to work directly with, or indirectly for, older persons. Job opportunities for students who have academic preparation in gerontology are available in community agencies servicing the older adult, long term care facilities and hospitals, senior citizen living facilities, and community recreation and senior centers. The program is open to students in any major. Students may decide to complete the requirements for a certificate in gerontology or a gerontology minor.

The Student Gerontological Society provides students with opportunities to participate in the annual campus-wide Health Fest in October, community outreach activities, and program marketing as well as attend national and regional conferences. Sigma Phi Omega, the national honorary society in gerontology, recognizes students' exemplary scholastic accomplishments in the field of aging. Undergraduate students with a QPA of 3.300 or above (on a 4.000 scale) are eligible to apply.

## Advisement

Students planning to complete the program in gerontology will declare a major within a department. Major responsibility for advisement will rest within this department. Students must assume responsibility for fulfilling all requirements for graduation.

## Requirements for the Minor

Students must take a total of five 3-credit courses as well as a 3-credit internship related to major area of interest and involving the elderly unless they have taken such an internship in their major. Of the five required courses, one must be Aging and the Older Person (GERO 265), at least one course from the list of approved gerontology courses in the health science area, and one course from the psychological/sociological area.

To enter the gerontology program, students must submit an application form requiring the advisor's signature. A quality point average of 2.500 is required at the end of the semester prior to internship. Students are to notify the gerontology office when they have completed all of the requirements.

## Courses Approved for Gerontology:

- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 476 - Physiological Aspects of Aging and Human Performance Credits: 3
- GERO 265 - Aging and the Older Person Credits: 3
- GERO 425 - Women and Aging Credits: 3
- GERO 450-Gerontology Internship Credits: 3 to 12
- GERO 465 - Seminar in Gerontology Credits: 3
- GERO 490 - Independent Study Credits: 1 to 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 414 - Death and Dying Credits: 3
- NURS 498 - Selected Topics Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- SASW 342 - Sociology of Aging Credits: 3


# Safety and Environmental Management (BS) 

## Coordinator

Joseph Cali
"The education and support I received from the faculty in the Slippery Rock University's safety and environmental management major was excellent! The major contained top notch classroom education and a practical real world internship that enabled myself and other alumni to be extremely marketable to employers."

Angela Mattis, ${ }^{9} 9$
innovative approaches in the establishment and direction of comprehensive occupational safety programs in educational, governmental, and private business and industrial enterprises. The curriculum is aimed at assuring understanding of both foundation and application concepts emphasized by contemporary safety programs. The curriculum emphasizes safety integration, risk curtailment, hazard abatement and loss minimization. The philosophical basis of this major is to achieve the mission of curtailing the causes of incidents and minimizing sustained losses and incurred costs. The primary focus is to protect and preserve people, property, and productivity. The major is based on safety management with technical elements incorporated throughout the curriculum. Courses are offered primarily during the day with some evening classes.

All students accepted into the safety and environmental management major are encouraged to be student members of both the American Society of Safety Engineers and the student section of ASSE at Slippery Rock University. Students are also encouraged to attend meetings, conferences, seminars, and workshops as part of their professional educational growth.

Students enrolled in the safety major are provided a unique opportunity to access Slippery Rock University's Center for Safety and Environmental Management. Students are able to enroll, at no cost, in the available certification course offerings and programs, such as hazardous waste operations and emergency response, permit required confined space, hazard communication, respiratory protection, blood borne pathogens, asbestos, etc.

The B.S. in Safety and Environmental Management degree is recognized by the Institute for Safety and Health Management. Such recognition permits Slippery Rock University's Safety Management graduates to apply for the Associate Safety and Health Manager's (ASHM) designation. With two additional years of work experience the graduate can then seek the Certified Safety and Health Manager's designation. Individuals graduating from nonrecognized programs must work five years before applying for certification.

Upon completion of the degree, students are prepared for entry-to-mid-level administrative, managerial, and supervisory positions in the field of safety in a variety of enterprises, including, health care, insurance, manufacturing, chemical, consulting, higher education and government agencies. Examples of positions include: risk control manager, safety consultant, safety coordinator, safety account manager, assistant safety representative, loss control representative, health and safety scientist, safety and environmental manager, safety engineer, regional safety coordinator, senior environmental engineer, corporate health and safety officer, regulatory compliance coordinator, safety and health compliance officer, safety supervisor, and field safety coordinator.

The internship program is administered in cooperation with a variety of agencies, including government, industry insurance, health care and other related enterprises. Students in the internship program gain practical experience under the direction of professional safety personnel. The 12 -week, 12 -credit internship is offered only during the summer term, with the majority of interns receiving compensation. Students have been offered safety positions at their internship site as a result of their performance.

Contact the Department of Health and Safety for the most current requirements.

## Requirements for the Major - Credits: 60

## Required Professional Courses:

- CHEM 104 - Introduction Chemistry I Credits: 3
or
- CHEM 107-General Chemistry I Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits: 3
- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 - Comprehensive Emergency Management and Fire Services Credits: 3
- HSAF 338 - Ergonomics and Human Factors Credits: 3
- HSAF 348 - Hazardous Materials and Waste Management Credits: 3
- HSAF 358 - Construction Safety Credits: 3
- HSAF 368 - Injury and Damage Incidents Evaluation Credits: 3
- HSAF 408 - Contemporary Safety Topics and Issues Credits: 3
- HSAF 418 - Security in the Workplace Credits: 3
- HSAF 428 - Motor Transportation Fleet Safety Credits: 3
- HSAF 448 - Management and Integration of Safety Credits: 3
- HSAF 450 - Internship Credits: 12
- HSAF 488 - Safety Training and Development Credits: 3
- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 354 - Human Resources Management Credits: 3


## Internship Requirement

It is the student's responsibility to secure an internship site. If an internship site is not secured, the student will take course work to meet the 120 credit graduation requirement.

Degree Completion in Four Years Safety \& Environmental Management (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies Credits:21
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Credits: 12
- CHEM 104 - Introduction Chemistry I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits: 3
- HSAF 338 - Ergonomics and Human Factors Credits: 3
- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3

Junior Year - Total Hours: 30

- Elective Credits: 3
- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 - Comprehensive Emergency Management and Fire Services Credits: 3
- HSAF 348 - Hazardous Materials and Waste Management Credits: 3
- HSAF 358 - Construction Safety Credits: 3
- HSAF 368 - Injury and Damage Incidents Evaluation Credits: 3
- HSAF 428 - Motor Transportation Fleet Safety Credits: 3
- HSAF 448 - Management and Integration of Safety Credits: 3
- HSAF 488 - Safety Training and Development Credits: 3
- MGMT 354 - Human Resources Management Credits: 3


## Senior Year - Total Hours: 30

- Elective Credits: 12
- HSAF 408 - Contemporary Safety Topics and Issues Credits: 3
- HSAF 418 - Security in the Workplace Credits: 3
- HSAF 450 - Internship Credits: 12 (summer)


## Mathematics

## 229 Vincent Science Hall

724-738-2061

## Chair

Robert Buck

## Secretary

Debra Dickey

## Faculty

Robert Buck, Michael Detlefsen, Jeffrey Forrest, Elise Grabner, Gary Grabner, Mohammad Ismail, William Lindgren, Richard Marchand, J. Lyn Miller, Gary Roberts, Andrzej Szymanski, Robert Vallin
"The mathematics department (faculty) was instrumental in providing a learning atmosphere conductive to my development as a student and an individual. They accomplished this by being professionals and friends, as well as professors. In addition to learning the technical concepts as a mathematics major at SRU, the most valuable tool that I've developed is being able to make decisions analytically with confidence, in my profession and in life."

Andrew Wozniak, '98
Students who have the desire and the ability to major in mathematics will find a course of study that will meet their personal needs. Graduates are prepared for various career opportunities including jobs in actuarial science, finance, business, insurance, government, statistics, industry, or education. Many students go on to do graduate work in various disciplines, including mathematics and professional schools.

SRU mathematics majors are employed in such diverse occupations as operations research analyst, consulting actuary, university professor, engineer, statistician, information analyst, auditor, international account executive, senior computer analyst, senior commercial loan officer, manager of performance monitoring, and teaching in both the private and public sectors.

Mathematics majors at Slippery Rock have the opportunity to participate in the Math Club and to join Kappa Mu Epsilon, a national mathematics honorary. Majors participate in senior research projects directed by faculty members. Math majors have attended and given presentations on their projects at national meetings of the Mathematical Association of America; meetings of the Allegheny Mountain Section of the Mathematical Association of America; the annual Mathematics and Statistics Student conference at Miami University of Ohio; the annual Pi Mu Epsilon meeting at Youngstown State University, and the annual State System of Higher Education Mathematical Association meeting. There are two or three students doing informal, paid internships in actuarial science and/or statistics each summer.

The Mathematics Department offers minors in Mathematics, Statistics, Elementary School Mathematics, and Middle School Mathematics. Certificates* are available in Elementary School Mathematics and Middle School Mathematics. The department also offers a Certificate in Statistical Applications.

* This is not related to Pennsylvania State Certification.


## Certificate in Elementary School Mathematics

Note: This program is not related to Pennsylvania State Certification.

## Requirements for the Certificate in Elementary School Mathematics

- MATH 118 - Elementary Geometry Credits: 3


## And at Least Four Additional Courses From:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3


## Admission Restricted to Certified Teachers Who Have Completed the Equivalent Of:

- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3


## Certificate in Middle School Mathematics

This is not related to Pennsylvania State Certification.

## Requirements for the Certification

For certified teachers who have completed the equivalent of MATH 210 - Elementary Mathematics I, MATH 310 Elementary Mathematics II, and SEFE 311 - Teaching of Mathematics in Middle School.

- And at least three additional courses from: (at least one course must be from Group A)
- MATH 118 - Elementary Geometry Credits: 3 or Math 304
- MATH 225 - Calculus I Credits: 4
- MATH 304 - Geometric Structures Credits: 3 or Math 118

Group A:

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 320 - Theory of Numbers Credits: 3


## Group B:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


## Admission Restricted to Certified Teachers Who Have Completed the Equivalent of:

- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3
- SEFE 311- Teaching of Mathematics in the Middle School Credits: 3


## Certificate in Statistical Applications

## Requirements for the Certificate

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3


## Three Additional Courses:

At least one course must be from computer science.

- BIOL 325 - Biometry Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 318 - Intermediate Statistical Analysis Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3
- MATH 353 - Mathematical Statistics II Credits: 3
- PSYC 421 - Research Methods and Statistical Applications II Credits: 3


## Mathematics (BA)

## College-Wide Requirements:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4


## Requirements for the Major - Credits: 36

## Required Courses

A three-hour independent study thesis, and at least 6 credits of electives from mathematics courses 300 and above. In addition, candidates for the bachelor of arts degree must satisfactorily complete, either by placement or by coursework, the first three semesters of a foreign language.

- MATH 131 - Discrete Mathematics Credits: 3
(* see footnote)
- MATH 230 - Calculus II Credits: 4
(* see footnote)
- MATH 231 - Calculus III Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3 (* see footnote)
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1


## Footnote

* Minimum grade of C required.


## Degree Completion in Four Years Mathematics (BA)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- GERM 101 - German Language and Culture I Credits: 3 Recommended
- GERM 102 - German Language and Culture II Credits: 0 Recommended
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3 Recommended


## Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 11
- COMM 200 - Public Speaking Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3 Recommended
- GERM 103 - German Language and Culture III Credits: 0 Recommended
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3


## Junior Year- Total Hours: 30

- MATH Electives - Credits: 6
- Liberal Studies/Electives - Credits:14
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1


## Senior Year- Total Hours: 30

- Liberal Studies/Electives - Credits: 26
- MATH 490 - Independent Study Credits: 1 to 3
- MATH 491 - Mathematics Seminar Credits: 1 Recommended


## Residency Requirement for Mathematics Majors

To earn a Bachelor of Science or Bachelor of Arts degree in mathematics, all students must complete a minimum of 12 credit hours of mathematics courses at the 300 level or above at Slippery Rock University.

## Mathematics (BS)

## College-Wide Requirements:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4


## Requirements for the Major - Credits: 58

## Required Courses

Competency in an approved computer language, and at least 12 additional hours selected from approved mathematics courses numbered above 300. The program must include one of the following sequences: 325-326; 307-308;301-302;320-325;335-311;309-315.

In addition, the requirements in one of several special interest areas, ranging from 14 to 16 hours, must be completed or the student has the option of taking a minor if available in the area of special interest. The special interest areas are Actuarial Science, Biology, Chemistry, Community Health, Computer Science, Economics, Finance, Geology,

Mathematics Graduate School, Philosophy, Physics, Pre-masters of Business Administration, Secondary Education, Psychology, Sociology, and Statistics.

Hours in special interst areas may be included among the required liberal studies courses.
Students must complete Math 131, 225, 230, and 235 with a grade of at least C before being allowed to register for upper division courses.

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 325-Abstract Algebra I Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1 (two one-hour seminar courses)


## Footnote

* Minimum grade of C required.


## Degree Completion in Four Years Mathematics (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 7
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3

Recommended

## Sophomore Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 14
- COMM 200 - Public Speaking Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 14
- Electives - Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 325-Abstract Algebra I Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1

Senior Year - Total Hours: 30

- MATH Electives - Credits: 12
- Liberal Studies/Special Interest - Credits: 17
- MATH 491 - Mathematics Seminar Credits: 1


## Residency Requirement for Mathematics Majors

To earn a Bachelor of Science or Bachelor of Arts degree in mathematics, all students must complete a minimum of 12 credit hours of mathematics courses at the 300 level or above at Slippery Rock University.

## Minor in Elementary School Mathematics

## Requirements for the Minor

- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- MATH 118 - Elementary Geometry Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3

And at Least Three Additional Courses from:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Mathematics

## Requirements for the Minor

- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4


## And One of the Following Tracks:

## A. Pure Mathematics Track:

- MATH 235 - Modern Concepts of Mathematics Credits: 3

And at Least Two of the Following:

- MATH 304 - Geometric Structures Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 320 - Theory of Numbers Credits: 3
- MATH 325 - Abstract Algebra I Credits: 3
- MATH 326 - Abstract Algebra II Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3


## B. Applied Mathematics Track:

- MATH 240 - Linear Algebra and Differential Equations Credits: 3

And at Least Two of the Following:

- MATH 301 - Differential Equations I Credits: 3
- MATH 302 - Differnetial Equations II Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 315 - Numerical Mathematics Credits: 3
- MATH 331 - Mathematical Methods of Physics Credits: 3
- MATH 335 - Mathematical Modeling Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Middle School Mathematics

## Requirements for the Minor

- MATH 118 - Elementary Geometry Credits: 3 or MATH 304 - Geometric Structures
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 304 - Geometric Structures Credits: 3
or Math 118
- MATH 310 - Elementary Mathematics II Credits: 3
- SEFE 311 - Teaching of Mathematics in the Middle School Credits: 3


## Two Additional Courses are Required - At least one from Group A

Note: This program should prepare students to take the Praxis Exam for Middle School Mathematics Certification. Note: Some of the courses have prerequisites which must be met.

## Group A:

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 320 - Theory of Numbers Credits: 3


## Group B:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Statistics

## Requirements for the Minor

No more than six credits may count toward both a mathematics major and a statistics minor.

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3
- MATH 353 - Mathematical Statistics II Credits: 3


## And at Least 3 Courses From:

- BIOL 325 - Biometry Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 318 - Intermediate Statistical Analysis Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- PSYC 421 - Research Methods and Statistical Applications II Credits: 3


## Teacher Certification in Mathematics

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in mathematics must earn a bachelor of arts or a bachelor of science degree in mathematics and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

## Nursing

119 Behavioral Science Building
724-738-2065/2324

## Chair

Kit Kellinger

## Secretary

Joanne Santus

## Faculty

Judith DePalma, Diana Jones, Kit Kellinger, Ramona Nelson, Joyce Penrose, Kerry Risco
This program, which leads to a bachelor of science in nursing, is designed to meet the needs of registered nurses who are graduates of hospital diploma nursing programs or associate degree programs in nursing. The program is accredited by the National League for Nursing Accrediting Commission. To be eligible to begin the junior level clinical nursing courses, students must have completed all lower division requirements or have direct articulation. For students transferring in 63 or more non-remedial college credits, the curriculum for the program includes free electives, two required supportive course, and courses in the nursing major. For students with less than 63 transfer credits, the curriculum also includes a liberal studies component. The nursing curriculum includes theoretical and clinical content.

The flexibility of the program enables the registered nurse to attend school on a part-time or full-time basis. Nursing and the two support courses are web-based and available to nursing students anytime, anywhere. The purpose of the program is to prepare practitioners of nursing to provide health care to persons, families, and groups in a variety of settings, using the nursing process. The program provides a strong educational foundation upon which to build graduate study.

Students in the RN-BSN upper division nursing program are required to have a minimum of 2.500 QPA on entry to the nursing major and must maintain the 2.500 QPA throughout the nursing program from entry to exit. The students must have and maintain BOTH the cumulative 2.500 QPA and the nursing major 2.500 QPA. Students can elect to obtain a school nurse certificate, a minor or certificate in health care informatics, or a certificate in case management while completing their BSN. Other minors can also be pursued while enrolled in the BSN program.

## Certificate in Case Management

## Requirements for Certificate in Case Management

Through careful selection of electives, nursing majors can obtain a certificate in Case Management while completing their BSN.

## Nursing (BSN)

## Requirements for the Major - Credits: 39

All students must also have a total of 48 credits in Liberal Studies courses for graduation.

## Core Courses

- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 313 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 314 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 322 - The Teaching-Learning Process in Nursing Credits: 3
- NURS 327/328 - Group Process in Nursing and Health Care/Clinical Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 416/417- Case Management in Nursing Credits: 3
- NURS 422 - Nursing Research Credits: 3
- NURS 426/427-Community Health Nursing/Clinical Credits: 3


## Nursing Electives - Credits: 6

6 credits from the following:

- NURS 412/413 - Nursing Process with School Credits: 6
- NURS 415 - Management of School Health Services by School Nurses Credits: 3
- NURS 429 - Financial Management for Nursing Care Managers Credits: 3
- NURS 498 - Selected Topics Credits: 3
- NURS 510 - Cardiovascular Function: Assessment and Treatment Credits: 3
- NURS 511 - Advanced Healthcare Informatics Credits: 3


## Required Non-Nursing Courses - Credits: 6

30 credits are granted through advanced placement following direct articulation for diploma graduates. (Upon successful completion of the NCLEX-RN). All credits for Associate Degree graduates are transferred in.

- PHIL 325-Medical/Health Care Ethics Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Degree Completion in Two Years

(for students having 63 or more credits in transfer)

## General electives to complete: $\mathbf{1 2 0}$ total hours

## Junior Year - Total Hours: 21

- NURS Elective Credits: 3
- Electives
(** See footnote)
- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 313 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 314 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 322 - The Teaching-Learning Process in Nursing Credits: 3
- NURS 327/328 - Group Process in Nursing and Health Care/Clinical Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Senior Year - Total Hours: 18

- NURS Electives Credits: 3
- General electives to complete 120 total hours*
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 416/417 - Case Management in Nursing Credits: 3
- NURS 422 - Nursing Research Credits: 3
- NURS 426/427 - Community Health Nursing/Clinical Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Footnotes

* Note: All students must also have a total of 48 credits in Liberal Studies courses for graduation.
** Electives depend on number of transfer credits.


## Requirements for School Nurse Certification

Through careful selection of electives, nursing majors can qualify for certification as a school nurse by taking the following

In addition, the student must have two courses in college English ( 6 credits), two courses in college math ( 6 credits), and a minimum QPA of 2.80. English courses must include a writing course and a literature course. Statistics will only count as a math course if offered through the Math Department.

- NURS 412/413 - Nursing Process with School Credits: 6
- NURS 415 - Management of School Health Services by School Nurses Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3
or
- SPED 105-Americans with Disabilities Credits: 3


## Academic Standing

BSN majors must attain a grade of C or better in all nursing major theory courses and pass all practica. In the event that a final course grade of C or practicum grade of P is not attained, the course and/or practicum may be repeated one time. Failure to achieve the required theory or practicum grade on the second attempt will result in the removal of the student from the nursing major.

# Parks and Recreation/Environmental Education 

101 Eisenberg Building<br>724-738-2068

## Chair

Bruce Boliver

## Secretary

Brenda Fedokovitz

## Faculty

Bruce Boliver, Jennifer Chestnut, Colleen Cooke, Daniel Dziubek, Deborah Hutchins, Paulette Johnson, Christopher Leininger, John Lisco, Randall Pitstick, Dale Stewart, Lalanda Stromp

The Department of Parks and Recreation/Environmental Education offers a diverse academic program. The bachelor of science in parks and recreation offers three options: park and resource management, resort recreation management/tourism, and therapeutic recreation services.

The department cooperates closely with a number of government and private agencies and organizations in an effort to provide quality academic and practicum experiences. Special study opportunities in interpretive services, park law enforcement, and park and open space planning are available. A cooperative education program, which permits students to alternate semesters of work and study, is available in cooperation with the U.S. Army Corps of Engineers and National Park Service.

The Seasonal Ranger Training Program qualifies students for seasonal law enforcement commissions with the National Park Service, U.S. Fish and Wildlife Service, and other park agencies.

Cooperative agreements with a variety of resort, recreation, environment, and health-related agencies provide ample opportunities for students to acquire a sound base in the practical application of theory, knowledge, and skills provided in the classroom.

Graduates of the department's programs are currently employed in positions within the park, recreation, and environmental education fields. Many are serving as resort recreation directors, YMCA directors, therapeutic recreation specialists, national and state park rangers and managers, park naturalists, outdoor recreation planners, environmental educators, and other similar positions.

All parks and recreation and non-teaching certified environmental education majors must qualify for department advanced standing prior to enrollment in PREE 450. A copy of the requirements for advanced standing is available in the department office.

## Education - Environmental Education Emphasis (BSEd)

See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## Environmental Education (BSEd) (with or without Certification Option)

## Coordinator

Daniel Dziubek
The degree program in environmental education is administered by the Department of Parks and Recreation/Environmental Education. It provides K-12 teacher certification in environmental education and is the only four-year degree program in environmental education within the Commonwealth of Pennsylvania. A non-certification option is also available. Students receive practicum and other experiences from a wide variety of public and private education programs, including the McKeever Environmental Learning Center, operated by Slippery Rock University, and the Jennings Environmental Education Center, operated by the Pennsylvania Bureau of State Parks. Special opportunities are provided through many programs such as Project Learning Tree, Project WILD, and Keystone Aquatic Resource Education, and a number of other nationally recognized environmental education curricula.

Graduates are currently serving as teachers, environmental education coordinators, environmental center directors, park naturalists and interpretive specialists, conservation district executives, and administrators in a variety of educational and resource-oriented agencies.

Note: Admission to and retention in this teacher education program are prerequisites for teacher education coursework; minimum QPA and major QPA prerequisites also apply. See Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

Department advanced standing status is required for non-teaching certification students prior to enrollment in PREE 450. Details are available in the Department of Parks and Recreation/Environmental Education or from the student's advisor.

For other degree programs administered by the Department of Parks and Recreation/Environmental Education see the Parks and Recreation section.

## Requirements for the Major - Credits: 60

## Required Professional Education Courses - Credits: 39

- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3
- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- PREE 455 - Student Teaching - Environmental Education Credits: 12, 6, 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Required Environmental Education Courses - Credits: 21

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- PREE 160 - Intoduction to Environmental Education Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 361 - Environmental Teaching Credits: 3
- PREE 464 - Environmental Decision Making Credits: 3


## Professional Electives

( 12 credits selected in consultation with advisor)

## Degree Completion in Four Years Environmental Education (BSEd)

Completion Hours: 120
(BSEd with or without Certification Option)

## Freshman Year - Total Hours: 27

- Liberal Studies - Credits: 18
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- PREE 160 - Intoduction to Environmental Education Credits: 3
- SEFE 200 - Introduction to Education Credits: 3


## Sophomore Year- Total Hours: 30

- Liberal Studies - Credits: 18
- CDEV 248 - Human Development and Education Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3

Junior Year- Total Hours: 30

- Liberal Studies - Credits: 12
- CDEV 342 - Educational Psychology Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3 (summer)
- PREE 361 - Environmental Teaching Credits: 3
- PREE 464 - Environmental Decision Making Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Senior Year - Total Hours: 33

- PREE Electives - Credits: 12
- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (with cert.) or
- PREE 455 - Student Teaching - Environmental Education Credits: 12, 6, 3 (without cert.) (without cert.)


## Parks and Recreation/Environmental Education (BS)

Requirements for the Major - Credits: 60

## Requirements for All Specializations

Core Courses - Credits: 27
(Therapeutic Recreation Specialization ( 24 credits) does not require 207 or CPSC 110)

- CPSC 110 - Computer Concepts Credits: 3 (RRM/T) or PREE 207
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 207 - Computer Aided Planning and Management Credits: 3 or CPSC 110
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 450 - Internship Credits: 9 to 12

Track Courses - Credits: 33-36
Professional Electives Selected in Consultation with Advisor - Credits: 12

## Choose One Specialization

## Specialization in Park and Resource Management - Credits: 33

Elective tracks in park and open space planning, park law enforcement, environmental education/interpretation, and outdoor leadership.

- PREE 170 - Fundamentals of Park and Resource Management Credits: 3
- PREE 213 - Environmental Resource Analysis Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- PREE 313 - Recreation Area Design Credits: 3
- PREE 347 - Interpretive Methods and Programming Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 372 - Visitor Services Management Credits: 3
- PREE 377 - Cultural Resources Management Credits: 3
- PREE 378 - Parks, Wildlife and Wildlife Management Credits: 3
- PREE 475 - Park and Resource Management Credits: 3


## Specialization in Resort Recreation Management/Tourism - Credits: 33

- ACCT 205 - Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3
- PREE 215 - Park and Recreation Public Relations Credits: 3
- PREE 230 - Recreation Leadership Credits: 3
- PREE 234 - Leisure Services Programming Credits: 3
- PREE 311 - Principles of Commercial Recreation/Tourism Credits: 3
- PREE 316 - Management of Leisure Services and Commercial Facilities Credits: 3
- PREE 342 - Group Facilitation and Leadership Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 416 - Resort/Conference Group Recreation Credits: 3
- PREE 436-Tournament Structure and Administration Credits: 3


## Specialization in Therapeutic Recreation Services - Credits: 36

Therapeutic recreation specialists, also known as recreational therapists, use selective activities to address the physical, cognitive, and psychosocial needs of persons with illness or disability. Activity modalities and intervention techniques are utilized to improve function/health and to promote independence and wellness.

The bachelor of science degree emphasis in therapeutic recreation supplements a solid liberal studies foundation with course work related to human development/growth and movement. Field work, practicum, and a culminating internship assist students in gaining experience in a TR setting prior to graduation. In addition, students may choose from several specialty tracks which offer focused coursework to enhance knowledge and skills in a given area, i.e., mental health, rehabilitation, corrections, gerontology, and community. Minors are also available in related areas such as gerontology, exceptionalities, psychology, sociology, and adapted physical activity and rehabilitation.

The therapeutic recreation program is designed with the intent that students will meet the eligibility requirements to sit for the national certification exam administered by the National Council for Certification.

- CDEV 248 - Human Development and Education Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PREE 220 - Therapeutic Recreation Services Credits: 3
- PREE 232 - Therapeutic Recreation for People with Physical Disabilities Credits: 3
- PREE 233 - Therapeutic Recreation for People with Mental Health and Psychosocial Disorders Credits: 3
- PREE 314 - Clinical Aspects of Therapeutic Recreation Credits: 3
- PREE 319 - Client Assessment in Therapeutic Recreation Credits: 3
- PREE 320 - Therapeutic Recreation Program Design Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PREE 423 - Therapeutic Recreation Interventions/Leisure Education Credits: 3


## Therapeutic Recreation Certification Requirements:

In addition to the 60 credits required in the Therapeutic Recreation major both PSYC 105 and 276 must be completed by the student to be eligible to take the NCTRC Certification Exam.

## Degree Completion in Four Years Park and Resource Management (BS)

Completion Hours: $\mathbf{1 2 0}$

## Freshman Year - Total Hours: 27

- Liberal Studies Credits: 15
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 170 - Fundamentals of Park and Resource Management Credits: 3
- PREE 207 - Computer Aided Planning and Management Credits: 3

Sophomore Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 18
- PREE 213 - Environmental Resource Analysis Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3

Junior Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 12
- PREE 313 - Recreation Area Design Credits: 3
- PREE 347 - Interpretive Methods and Programming Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3 (summer)
- PREE 372 - Visitor Services Management Credits: 3
- PREE 378 - Parks, Wildlife and Wildlife Management Credits: 3


## Senior Year - Total Hours: 33

- PREE Electives Credits: 6
- Liberal Studies Credits: 3
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 377-Cultural Resources Management Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (summer)
- PREE 475 - Park and Resource Management Credits: 3


## Degree Completion in Four Years Resort Recreation Management/Tourism

## Completion Hours: 120

## Freshman Year - Total Hours: 27

- Liberal Studies Credits: 18
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 215 - Park and Recreation Public Relations Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies Credits: 21
- CPSC 110 - Computer Concepts Credits: 3
- PREE 230 - Recreation Leadership Credits: 3
- PREE 234 - Leisure Services Programming Credits: 3

Junior Year - Total Hours: 30

- PREE Elective Credits: 6
- Liberal Studies Credits: 6
- ACCT 205-Accounting for Decision Makers Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3
- PREE 311 - Principles of Commercial Recreation/Tourism Credits: 3
- PREE 316 - Management of Leisure Services and Commercial Facilities Credits: 3
- PREE 342 - Group Facilitation and Leadership Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
(summer)

Senior Year - Total Hours: 33

- PREE Electives Credits: 6
- Liberal Studies Credits: 3
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 416 - Resort/Conference Group Recreation Credits: 3
- PREE 436 - Tournament Structure and Administration Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (summer)


## Degree Completion in Four Years Therapeutic Recreation

## Completion Hours: 120

## Freshman Year - Total Hours: 27

- Liberal Studies Credits: 18
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 232 - Therapeutic Recreation for People with Physical Disabilities Credits: 3

Sophomore Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 15
- CDEV 248 - Human Development and Education Credits: 3
- PREE 220 - Therapeutic Recreation Services Credits: 3
- PREE 233 - Therapeutic Recreation for People with Mental Health and Psychosocial Disorders Credits: 3
- PREE 314 - Clinical Aspects of Therapeutic Recreation Credits: 3

Junior Year - Total Hours: 30

- PREE Elective Credits: 6
- Liberal Studies Credits: 9
- ERS 264 - Applied Anatomy Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PREE 319 - Client Assessment in Therapeutic Recreation Credits: 3
- PREE 320 - Therapeutic Recreation Program Design Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3 (summer)
- PREE Electives Credits: 3
- Liberal Studies Credits: 6
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PREE 423 - Therapeutic Recreation Interventions/Leisure Education Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (summer)


## Psychology

226 Vincent Science Hall
724-738-2077

## Chair

Richard Port

## Secretary

Linda Newton

## Faculty

Mohammad Akhtar, Gayle Brosnan-Watters, Catherine Massey, Chris L. Niebauer, Richard Port, Ann Romanczyk, Jennifer Sanftner, Linda Veronie

Psychology is the science of behavior. The discipline is experiencing unprecedented growth and change. This is an important and exciting science, which attempts to understand human behavior.

The Department of Psychology is oriented toward meeting three broad educational needs: preparation of students for occupations related to the field, preparation of exceptional students for entry into graduate programs at universities, and preparation for other fields, such as medicine, law, social work, and others. The department has established experimental laboratories for studying animal and human learning, cognition, physiological processes, and clinical eating disorders. In addition, the department has developed working relationships with a number of private and community agencies to provide research and training experiences for students.

Opportunities for professional involvement include the Psychology Club, which invites speakers to campus and organizes field trips as well as opportunity to gain research experience via participation in departmental research activities. A significant number of majors have achieved co-authorship on research presentations at national meetings and on articles published in professional journals. Internship experiences generally reflect the career interests of the student. Recent sites include agencies offering services involving troubled youth, drug and alcohol rehabilitation, geriatric agencies, children and youth services, crime victim advocates, and general psychiatric facilities.

Alumni have successfully pursued graduate training in a wide spectrum of professional areas including clinical, counseling and social psychology, medicine and neuroscience. Many have chosen academic careers while others are involved in professional services.

## Minor in Psychology

## Requirements for a Minor in Psychology - Credits: 15

## Required courses:

- Elective Psychology Courses Credits: 15 (9 credits must be at the 300 or 400 level)
- PSYC 105 - Introduction to Psychology Credits: 3


## Psychology (BA)

## Requirements for the Major - Credits: 36

## Required Core Courses - Credits: 13

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 303 - Learning Credits: 3 or PSYC 338
- PSYC 325 - Introduction to Experimental Psychology Credits: 3
- PSYC 326 - Experimental Psychology Laboratory Credits: 1
- PSYC 338 - Cognitive Psychology Credits: 3 or PSYC 303


## Core Electives

Other courses are selected in consultation with the advisor from the Department of Psychology.
A minimum of 4 courses from the following:

- PSYC 276 - Abnormal Behavior Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3
- PSYC 311 - Physiological Psychology Credits: 3
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 360 - History of Psychology Credits: 3
- PSYC 377 - Social Psychology Credits: 3


## Degree Completion in Four Years Psychology (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies/Elective Credits: 21
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Elective Credits: 17
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 325 - Introduction to Experimental Psychology Credits: 3
- PSYC 326 - Experimental Psychology Laboratory Credits: 1


## Junior Year - Total Hours: 30

- Liberal Studies/Elective Credits: 12
- Modern Languages Credits: 6

A minimum of 4 course from the following:

- PSYC 276 - Abnormal Behavior Credits: 3 or
- PSYC 306 - Introduction to Pyschological Testing Credits: 3 or
- PSYC 311 - Physiological Psychology Credits: 3 or
- PSYC 344 - Developmental Psychology Credits: 3 or
- PSYC 360 - History of Psychology Credits: 3
or
- PSYC 377 - Social Psychology Credits: 3

Senior Year - Total Hours: 30

- PSYC Elective Credits: 12
- Modern Languages: 3
- Liberal Studies/Elective Credits: 12
- PSYC 303 - Learning Credits: 3
or
- PSYC 338 - Cognitive Psychology Credits: 3


## Psychology (BS)

Requirements for the Major - Credits: 42
Required Core Courses - Credits: 16-19

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 303 - Learning Credits: 3 or PSYC 338
- PSYC 325 - Introduction to Experimental Psychology Credits: 3
- PSYC 326 - Experimental Psychology Laboratory Credits: 1
- PSYC 338-Cognitive Psychology Credits: 3 or PSYC 303
- PSYC 420 - Community Service Practicum in Psychology Credits: 3
- PSYC 430 - Research Practicum in Psychology Credits: 3
or
- PSYC 450 - Psychology Internship Credits: 6


## Core Electives

Other courses are selected in consultation with the advisor from the Department of Psychology.
A minimum of 4 courses from the following:

- PSYC 276 - Abnormal Behavior Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3
- PSYC 311 - Physiological Psychology Credits: 3
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 360 - History of Psychology Credits: 3
- PSYC 377 - Social Psychology Credits: 3


## Degree Completion in Four Years Psychology (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies/Electives Credits: 21
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Elective Credits: 17
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 325 - Introduction to Experimental Psychology Credits: 3
- PSYC 326 - Experimental Psychology Laboratory Credits: 1

Junior Year - Total Hours: 30

- Liberal Studies/Elective Credits: 18

A minimum of 4 courses from the following:

- PSYC 276 - Abnormal Behavior Credits: 3
or
- PSYC 306 - Introduction to Pyschological Testing Credits: 3
or
- PSYC 311 - Physiological Psychology Credits: 3
or
- PSYC 344 - Developmental Psychology Credits: 3 or
- PSYC 360 - History of Psychology Credits: 3 or
- PSYC 377 - Social Psychology Credits: 3


## Senior Year - Total Hours: 30

- PSYC Elective Credits: 12-15
- Liberal Studies/Elective Credits: 9
- PSYC 303 - Learning Credits: 3 or
- PSYC 338 - Cognitive Psychology Credits: 3
- PSYC 420 - Community Service Practicum in Psychology Credits: 3 or
- PSYC 430 - Research Practicum in Psychology Credits: 3
or
- PSYC 450 - Psychology Internship Credits: 6


## School of Physical Therapy

Physical Therapy Building
724-738-2080

## Chair

Carol Martin-Elkins

## Secretary

Diane Carion

## Faculty

Barbara Billek-Sawhney, Mary Ann Holbein-Jenny, Christopher Hughes, Susan Kushner, Carol Martin-Elkins, Meg Michaels, Timothy Smith, Regis Turocy

## Physical Therapy 3 + 3 - Biology (BS)

The Biology Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Only Slippery Rock University students are eligible for this 3+3 option.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)

The curriculum requires each student to choose a facet of the profession to explore including one of the following areas service-learning, specialty care, administration, research or teaching.

## Degree Completion in Six Years Biology (BS)

## Freshman Year - Total Hours: 35

- Liberal Studies/Elective Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3

Sophomore Year - Total Hours: 29

- Liberal Studies/Elective Credits: 6
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- COMM 200 - Public Speaking Credits: 3
- MATH 225 - Calculus I Credits: 4

Junior Year - Total Hours: 34

- Liberal Studies/Elective Credits: 12
- BIOL 325 - Biometry Credits: 3
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 410 - Animal Physiology Credits: 3
- CHEM 335 - Biochemistry Credits: 3
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Senior Year

DEFINED BY THE DPT PROGRAM

## Physical Therapy 3+3-Exercise Science (BS)

The Exercise and Rehabilitative Sciences Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3-Exercise Science (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one " W " in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University students are eligible for this $3+3$ option.

If any of these requirements are not met, the $3+3$ designation will be removed from the student's record by your faculty advisor.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)

The curriculum requires each student to choose a facet of the profession to explore including one of the following areas service-learning, specialty care, administration, research or teaching.

## Degree Completion in Six Years Exercise Science (BS)

Freshman Year - Total Hours: 33

- Liberal Studies Credits: 13
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3

Sophomore Year - Total Hours: 35

- Math Credits: 3
- Liberal Studies Credits: 6
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5
- PSYC 105 - Introduction to Psychology Credits: 3

Junior Year - Total Hours: 36

- PYSC Credits: 3
- Liberal Studies Credits: 3
- ERS 321 - Care and Prevention of Injuries of the Physically Active Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3

Senior Year

DEFINED BY THE DPT PROGRAM

## Physical Therapy 3+3-Health Science (Community Health) (BS)

The Health and Safety Department offers a 3+3 option for students interested in a career in physical therapy.
Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3 - Health Science (Community Health) (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one "W" in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University student's are eligible for this $3+3$ option.

If any of these requirements are not met, the $3+3$ designation will be removed from the students record by your faculty advisor.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)

The curriculum requires each student to choose a facet of the profession to explore including one of the following areas service-learning, specialty care, administration, research or teaching.

## Degree Completion in Six Years Health Science (Community Health) (BS)

## Freshman Year - Total Hours: 31

- Liberal Studies Credits: 6
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 100 - Psychology Applied Credits: 3 or
- PSYC 105 - Introduction to Psychology Credits: 3


## Sophomore Year - Total Hours: 29

- Liberal Studies Credits: 6
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- PSYC 240 - Human Sexual Behavior Credits: 3 or
- PSYC 300 - Psychology of Gender Credits: 3 or
- PSYC 338 - Cognitive Psychology Credits: 3 or
- PSYC 344 - Developmental Psychology Credits: 3 or
- PSYC 377 - Social Psychology Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies/Electives Credits: 7
- HSAF 301 - Introduction to Health Education Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5


## Senior Year

DEFINED BY THE DPT PROGRAM

## Physical Therapy 3+3-Safety and Environmental Management (BS)

The Health and Safety Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3-Safety and Environmental Management (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one "W" in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University student's are eligible for this $3+3$ option.

If any of these requirements are not met, the $3+3$ designation will be removed from the students record by your faculty advisor.

Only Slippery Rock University students are eligible for this 3+3 option.
Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)

The curriculum requires each student to choose a facet of the profession to explore including one of the following areas service-learning, specialty care, administration, research or teaching.

## Degree Completion in Six Years Safety and Environmental Management (BS)

## Freshman Year - Total Hours: 30

- Liberal Studies/Electives Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103-College Writing II Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 100 - Psychology Applied Credits: 3 or
- PSYC 105 - Introduction to Psychology Credits: 3


## Sophomore Year - Total Hours: 29

- Liberal Studies Credits: 6
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits: 3
- HSAF 338 - Ergonomics and Human Factors Credits: 3

One of the Following Courses

- PSYC 240 - Human Sexual Behavior Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 377 - Social Psychology Credits: 3

Junior Year - Total Hours: 31

- Liberal Studies/Electives Credits: 7
- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 - Comprehensive Emergency Management and Fire Services Credits: 3
- HSAF 368 - Injury and Damage Incidents Evaluation Credits: 3
- HSAF 448 - Management and Integration of Safety Credits: 3
- MATH 125 - Precalculus Credits: 4
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5

Senior Year

DEFINED BY THE DPT PROGRAM

# College of Humanities, Fine and Performing Arts 

104 Strain Behavioral Science Building
724-738-4863

Dean
William McKinney
Assistant to the Dean
Diana Dreyer

Administrative Assistant
Helen Forsythe Kirk

Secretary
Amy McCamey

## Departments

Art
Dance

English
History
Modern Languages and Cultures
Music
Philosophy
Theatre

## Programs

Asian Studies
Women's Studies

## Gallery

The Martha Gault Art Gallery is named in honor of the long time chairperson of the Slippery Rock University Art Department who oversaw the initial development of the department. The gallery features a series of exhibitions during the academic year and summer exhibition. The program includes all media and artists, ranging from those of special local interest to those of regional and national reputation, and a student show in April.

Programs and courses in the College of Humanities, Fine and Performing Arts acquaint students with those broad and representative fields of knowledge and intellectual skills vital for the function of a free society. All students complete liberal studies courses within the College. These courses provide the foundation for a rewarding private life and intelligent participation in society, while providing the framework for a variety of careers in an ever-changing economy.

The College of Humanities, Fine and Performing Arts offers formal programs of study leading to baccalaureate degrees. The College's degree programs give students the opportunity to encounter a broad range of questions and ideas focusing on human responses to moral, historical, aesthetic, creative and philosophical problems. Dedicated to learning in the liberal arts tradition, the humanities and fine arts provide an excellent basis for rewarding and productive careers. Disciplines include art, Asian studies, dance, English, history, modern languages and cultures, music, philosophy, theatre, and women's studies.

## Art

Art Building I
724-738-2020

## Chair

Thomas Como

## Secretary

Marion Kennedy

## Faculty

Glen Brunken, J. Robert Bruya, Thomas Como, June Edwards, Katherine Mickle, Kurt Pitluga, Jon Shumway, Richard Wukich
"The encouragement and support I received from the faculty and students in the Art Department at Slippery Rock University enabled me to gain the confidence to make it as a professional artist. The instruction I received provided both a practical and philosophic foundation that continues to contribute to my success as artist and teacher."

# John Greco <br> BA '76 <br> Professor of Art <br> Santa Monica College 

"Being creative and skilled are the keys to surviving in today's fast paced environment. The experience in the Art Department at Slippery Rock University prepared me to succeed in graduate school and in my professional career where constant change challenges all assumptions."

Dalton Good
BFA '81

## Director of Publications

Point Park College
Students who major in art will develop the capacity to make tangible their aesthetic responses to experience. By increasing awareness of themselves, their environment and their culture, and by learning to think and act creatively, students prepare themselves for a life enriched through art. The broadly based Bachelor of Arts program with a concentration in art provides a diversified background suitable to generalist applications and an excellent foundation for further study in various disciplines.

The Bachelor of Fine Arts degree program is for students interested in art as a profession. It is an intensive program of study aimed at developing a foundation of attitudes, traits, and abilities with which to begin a lifetime as an artist. Emphasis is placed on students' personal experiences as the source of artistic motivation. The broadly based liberal studies curriculum provides students with a diversified background, which, in concert with their professional training, should lead to a successful career in art and applied art vocations.

The Art Department sponsors an overnight trip to visit galleries and museums in Boston, Philadelphia, Toronto, New York, Washington or Chicago each semester. Faculty organize day trips to exhibits in Cleveland and Pittsburgh several times each term. The department has developed exchange programs with excellent art schools in Europe and Costa Rica to provide students with the opportunity for an international experience. Students have the opportunity to spend a semester studying and traveling in Europe or Costa Rica, experiencing different cultures. More than 100 students have participated in these exchanges.

Art faculty periodically take students to various professional society meetings such as the National Society for Education in Ceramic Arts, International Sculpture Society and Southern Graphics Society annual meetings. At these meetings students meet and get to know professionals in their field. They have an opportunity to attend lectures and demonstrations on the latest techniques being developed.

Each term, in our master studio program, the Art Department has visiting artists come to campus for workshops, lectures and critiques of student work. This program enables the student to know and experience the broadest possibilities in their own work.

Each year, the final exhibition in the campus gallery is devoted to an exhibit of student art. For this show, an invited juror judges the show, awarding prizes and scholarships for the coming year.

Students may elect to do an internship in their junior or senior year. Internships allow the student to sharpen skills learned in the classroom in a professional, working atmosphere. Students complete internships in various museums and galleries, and in photography, architectural, ceramic and graphic design studios. While interning, students gain a working knowledge in their chosen field, make contacts with professional artists, and learn to use the ideas and techniques practiced in the classroom.

The Art Club organizes field trips to special art exhibitions, raises monies for entry fees to local art exhibitions and sponsors exhibitions of their work to show in local galleries.

## Art (BA)

## Requirements for the Major - Credits: 39

## Required Courses

Art History - Credits: 6

- ART 225 - Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## Studio Courses - Credits: 33

- 9 credits of a modern language or competency at the 103 level
- ART 105 - Basic Studio Drawing Credits: 3


## 3 Credits From:

- ART 100-2-D Design Credits: 3
- ART 101 - 3-D Design Credits: 3


## 6 Credits From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 9 Credits Selected From:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209-Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3

6 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308-Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## 6 Credits Selected From:

- ART 405 - Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Degree Completion in Four Years Art (BA)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- Language 101 - Credits: 3
- Liberal Studies - Credits: 9
- ART 100-2-D Design Credits: 3
- ART 101-3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3
- ART 106 - Basic Studio Painting Credits: 3
- ART 107-Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 6
- Electives - Credits: 6
- ART 225- Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3

Choose 2 from the Following:

- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208-Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225- Overview of Western Art Credits: 3


## Junior Year

- Language 103 - Credits: 3
- PESM Activity (2) - Credits: 2
- Liberal Studies - Credits: 13
- Electives - Credits: 3

Choose 1 from the Following:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3

Choose 2 from the Following:

- ART 305-Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308-Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310-Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312-Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Senior Year

- Liberal Studies - Credits: 15
- Electives - Credits: 9

Choose 2 from the Following:

- ART 405-Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Art (BFA)

Requirements for the Major - Credits: 75

## Required Courses

Art History - Credits: 6

- ART 225- Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## 6 Credits Selected From:

- ART 325 - North American Art History Credits: 3
- ART 335-The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3


## Art Seminar - Credits: 3

- ART 300-Art Seminar Credits: 3


## Studio Courses

6 credits Art electives 300/400 level ART classes
9 Credits Selected From:

- ART 100-2-D Design Credits: 3
- ART 101-3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3


## 9 Credits Selected From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 12 Credits Selected From:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3


## 12 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## 9 Credits Selected From:

- ART 405-Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 433 - Senior Project Design Credits: 3
- ART 434 - Senior Project Digital Media Credits: 3


## 3 Credits Selected From:

- ART 425 - Senior Project Drawing Credits: 3
- ART 426 - Senior Project Painting Credits: 3
- ART 427 - Senior Project Photography Credits: 3
- ART 428 - Senior Project Printmaking Credits: 3
- ART 429 - Senior Project Metalsmithing Credits: 3
- ART 430 - Senior Project Sculpture Credits: 3
- ART 431 - Senior Project Fibers Credits: 3
- ART 432 - Senior Project Ceramics Credits: 3
- ART 433 - Senior Project Design Credits: 3
- ART 434 - Senior Project Digital Media Credits: 3


## Degree Completion in Four Years Art (BFA)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 3
- ART 100-2-D Design Credits: 3
- ART 101 - 3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3
- ART 225 - Overview of Western Art Credits: 3
or
- ART 226 - Overview of World Art Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Choose 3 from the Following:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## Sophomore Year - Total Hours: 30

- ART Elective - Credits: 3
- Liberal Studies - Credits: 6
- ART 225 - Overview of Western Art Credits: 3 or
- ART 226 - Overview of World Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3

Choose 4 from the Following:

- ART 205-Art Synthesis Drawing Credits: 3
- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3

Junior Year - Total Hours: 30

- PESM Activity (2) - Credits: 2
- Liberal Studies - Credits: 9
- Elective - Credits: 1
- ART 300-Art Seminar Credits: 3
- ART 325 - North American Art History Credits: 3
- ART 335- The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3

Choose 4 from the Following:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309-Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313-Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Senior Year - Total Hours: 30

- ART Elective - Credits: 3
- Liberal Studies - Credits: 12
- ART 325 - North American Art History Credits: 3
- ART 335-The Renaissance Tradition Credits: 3
- ART 345-Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3
- ART 425 - Senior Project Drawing Credits: 3
or
- ART 434 - Senior Project Digital Media Credits: 3

Choose 3 from the Following:

- ART 405 - Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Minor in Art

## Requirements for the Minor in Art - Credits: 21

## 3 Credits Selected From:

- ART 105 - Basic Studio Drawing Credits: 3
- ART 106-Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 3 Credits Selected From:

- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3


## 3 Credits Selected From:

- ART 225- Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3
- ART 325 - North American Art History Credits: 3
- ART 335 - The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3


## 6 Credits Selected From:

- ART 205-Art Synthesis Drawing Credits: 3
- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209-Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3


## 6 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Minor in Art for Elementary Education Majors

Requirements for the Minor - Credits: 21

## Required Courses

- ART 105 - Basic Studio Drawing Credits: 3
- ART 225 - Overview of Western Art Credits: 3
- ART 317 - Advanced Topics in Elementary Art Credits: 3


## 3 Credits Selected From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 3 Credits Selected From:

- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3


## 3 Credits Selected From:

- ART 205-Art Synthesis Drawing Credits: 3
- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3


## 3 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308-Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3


## Minor in Art History

## Requirements for the Minor - Credits: 21

## Required Courses

- ART 225 - Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## Elective Courses

9 credits selected from:

- ART 325 - North American Art History Credits: 3
- ART 335 - The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3


## Dance

110 Morrow Field House
724-738-2036

## Chair

Nora Ambrosio

## Secretary

Judy Morris
Staff Musician
David Ledbetter

## Faculty

Nora Ambrosio, Thom Cobb, Jennifer Keller, Nola Nolen Holland, Ursula Payne, Melissa Teodoro
"My dance experience and education at Slippery Rock University was a well rounded and exciting one. My education enabled me to become an artist-in-residence in the public schools and develop my own dance company and dance studio in my hometown. I was able to have not only a great dance education but also a great opportunity to perform, travel and learn how to become an individual that can stand out from the rest. I am proud to represent SRU as an accomplished alumnus and recommend their dance program to all of my students. The faculty was and is always encouraging and supportive of me. I look forward to visiting and seeing the program grow each year."

The faculty of the Department of Dance at Slippery Rock University promotes dance as an academic discipline, a means of expression and an art form. The Department of Dance has a modern dance focus and is dedicated to the total development of each student: physically, emotionally, socially, and intellectually. Through excellent educational experiences in performance, choreography and teaching, with additional components of wellness and technology, the department prepares students for advancement in their chosen field of study.

Slippery Rock University Dance Theatre is the dance company in residence at SRU. SRU's Dance Theatre performs many concerts throughout the year both on and off campus. The department is a member of the American College Dance Festival and travels to these regional festivals every year. The department participates in the PA State Association for Health, Physical Education, Recreation, and Dance Conference, the Eastern District Association Conference as well as performs many lecture/demonstrations at area and regional high schools, senior centers and other locations. Dance majors have also traveled to Europe where they have performed in Lyon, France and London, England.

The dance honor society, Sigma Rho Delta, is opened to dance majors who meet the membership criteria.
The department offers a 3 to 9 -credit internship as an elective. Recent internships have included working in arts administration with a professional modern dance company, apprenticing with a professional ballet company as a costume design assistant, doing public relations for a major dance venue in Washington D.C., and working as a student assistant at a major dance center in New York City.

The Department of Dance is an accredited member of the National Association of Schools of Dance.

## Dance (BA)

## Requirements for the Major

## Core Courses - Credits: 40

- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 224 - Improvisation Credits: 2
- DANC 300 - Dance Composition Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 323 - Teaching of Dance Credits: 3

DANC 350 - Field Experience

- DANC 324 - Music for Dance Credits: 3
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 350 - Field Experience Credits: 1

DANC 323 - Teaching of Dance

- DANC 419 - Dance History II: Twentieth Century Credits: 3
- DANC 420 - Modern Dance IV Credits: 2
- DANC 425 - Senior Synthesis Credits: 3
- DANC 498 - Selected Topics: World Dance Credits: 2


## Technique Courses - Credits: 22

All Dance majors are required to demonstrate Level IV proficiency in modern dance and Level II proficiency in ballet and jazz dance, choosing from the following:

- DANC 220 - Modern Dance II Credits: 2
- DANC 221 - Ballet II Credits: 2
- DANC 222 - Jazz Dance II Credits: 2
- DANC 320 - Modern Dance III Credits: 2
- DANC 321 - Ballet III Credits: 2
- DANC 322 - Jazz III Credits: 2
- DANC 420 - Modern Dance IV Credits: 2
- DANC 421 - Ballet IV Credits: 2
- DANC 422 - Jazz IV Credits: 2
- DANC 426 - Modern Dance V Credits: 2
- DANC 427 - Ballet V Credits: 2
- DANC 428 - Modern Dance VI Credits: 2
- DANC 429 - Ballet VI Credits: 2
- DANC 498 - Selected Topics: World Dance Credits: 2


## Electives - Credits: 5

- DANC 112 - Tap Dance I Credits: 1
- DANC 271 - Dance Technology Credits: 3
- DANC 399 - Repertory Credits: 1
- DANC 400 - Dance Composition III Credits: 3
- DANC 450 - Dance Internship Credits: 3
- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3


## Degree Completion in Four Years Dance (BA)

## Completion Hours: 120

It is highly recommended that students take as many dance technique classes as possible each semester.

## Freshman Year - Total Hours: 32

- Modern Dance (2) - Credits: 4
- Ballet (2) - Credits: 4
- Jazz Dance - Credits: 2
- Liberal Studies - Credits: 9
- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 224 - Improvisation Credits: 2
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1


## Sophomore Year - Total Hours: 31

- Modern Dance (2) - Credits: 4
- Ballet - Credits: 2
- Language 101 - Credits: 3
- Language 102 - Credits: 3
- Liberal Studies - Credits: 6
- COMM 200 - Public Speaking Credits: 3
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 498 - Selected Topics: World Dance Credits: 2

Junior Year - Total Hours: 31

- Modern Dance (2) - Credits: 4
- Language 103 - Credits: 3
- Liberal Studies - Credits: 9
- DANC 300 - Dance Composition Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 324 - Music for Dance Credits: 3
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 419 - Dance History II: Twentieth Century Credits: 3

Senior Year - Total Hours: 26

- Liberal Studies - Credits: 18
- DANC Elective - Credits: 1
- DANC 323 - Teaching of Dance Credits: 3
- DANC 350 - Field Experience Credits: 1
- DANC 425 - Senior Synthesis Credits: 3


## Minor in Dance

## Requirements for the Minor - Credits: 24

## Required Courses

Level I technique classes in Modern Dance, Ballet and Jazz may be required of some Dance Minors and can be included in the SRU Liberal Studies requirement.

- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 105 - Dance Fundamentals Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 220 - Modern Dance II Credits: 2
(* see footnote)
- DANC 221 - Ballet II Credits: 2
(* see footnote)
- DANC 222 - Jazz Dance II Credits: 2 (* see footnote)
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 224 - Improvisation Credits: 2
- DANC 323 - Teaching of Dance Credits: 3 DANC 350 - Field Experience
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 350 - Field Experience Credits: 1

DANC 323 - Teaching of Dance

## Footnote

* All dance minors are required to demonstrate Level II proficiency in Modern Dance, Ballet and Jazz technique.


## Electives

Recommended coursework to enhance the Dance Minor:

- DANC 112 - Tap Dance I Credits: 1
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 324 - Music for Dance Credits: 3
- DANC 399 - Repertory Credits: 1
- DANC 400 - Dance Composition III Credits: 3
- THEA 131 - Fundamentals of Acting Credits: 3 and all dance technique courses.


## English

314 Spotts World Culture Building
724-738-2043

## Chair

Cornelius Cosgrove

## Assistant Chair

Joseph McCarren

## Secretarial Staff

Drinda Weber
Deborah Kosciuszko

## Faculty

Nancy Barta-Smith, William Boggs, Vernice Cain, Jace Condravy, Cornelius Cosgrove, William Covey, Jr., Robert Crafton, Lisa Craig, Anne Dayton, Danette DiMarco, Diana Dreyer, Anita Gorman, Christopher Kreiser, Cindy LaCom, Jane Lasarenko, Joseph McCarren, Robert McIlvaine, Alison McNeal, I.T. Meztli, Mark O’Connor, Sunita

Peacock, Rachela Permenter, Derrick Pitard, Erica Scott, James Strickland, Kathleen Strickland, Frederick White, William Zeiger

Within the liberal arts tradition, English courses integrate the studies of literature, language, and writing, and include a range from ancient through contemporary authors. Courses in literature, film, and linguistics, and in creative, technical, and business writing develop skills useful in law, public relations, government, business, publishing, teaching, and advertising. Students study textual analysis and interpretation, literary theory, ethics, and multicultural literatures.

## Education - English Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in English are available in the Department of English or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## English Literature (BA)

Students will study the interactions between cultures and literary texts. Writing, linguistics, and oral interpretation of literature are also required. The writing sequence includes an internship. Students take a minimum of 39 credits in English, exclusive of freshman composition courses.

## Requirements for the Major - Credits: 39

## Required Courses

- ENGL 220 - Writing About Literature Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 402 - World Literature Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 480 - Literature Seminar Credits: 3


## Three Credits Chosen From:

- ENGL 312 - Shakespeare Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3


## Three Credits Chosen From:

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3


## Three Credits Chosen From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3


## Electives - Credits: 6

## Proficiency of Modern Languages Through the 103 Level

## Degree Completion in Four Years English (BA in Literature)

Completion Hours: $\mathbf{1 2 0}$
Freshman Year - Total Hours: 31

- Language 101, 102 Credits: 6
- Liberal Studies Credits: 18
- PESM Activity Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 31

- Language 103 Credits: 3
- Liberal Studies Credits: 15
- COMM 200 - Public Speaking Credits: 3
- ENGL 220 - Writing About Literature Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1

Junior Year - Total Hours: 28

- Liberal Studies Credits: 10
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3


## Choose One From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3

Senior Year - Total Hours: 30

- Liberal Studies Credits: 3
- Electives Credits: 15
- ENGL 312 - Shakespeare Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3
- ENGL 402 - World Literature Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 480 - Literature Seminar Credits: 3


## Requirements for Internships

Internships with local and national organizations and industries enable students to acquire relevant experience in their areas of academic preparation. English majors with a QPA of 2.500 overall and 3.000 in their major courses are eligible.

## English Writing (BS)

## Requirements for the Major - Credits: 39 minimum

A minimum of 39 credits is required, exclusive of the freshman composition courses; ENGL 099, 101 and 103. Internships sequence courses outside of the Department of English, as described below, are in addition to the 39 credits in English. College Writing I is a prerequisite for all writing courses.

## Professional Concentration - Credits: 42

(At least 24 credits from the following): 18 credits from:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3 or ENGL 340
- ENGL 306-Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3 or
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3 or ENGL 240
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Required Literature Courses:

- ENGL 403 - Literary Criticism Credits: 3


## 6 Credits From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 312 - Shakespeare Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3
- ENGL 402 - World Literature Credits: 3


## Language Requirement Credits: 9

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 333-Concepts in Linguistics Credits: 3


## Degree Completion in Four Years English: Professional Writing (BS)

Completion Hours: 120
Freshman Year - Total Hours: 28

- PESM Activity Credits: 1
- Liberal Studies Credits: 21
- Liberal Studies Credits: 13
- COMM 200 - Public Speaking Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Concentration Credits: 1
- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3 or
- ENGL 340 - Creative Writing: Poetry Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1

Junior Year - Total Hours: 32

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 3
- Concentration 2 \& 3 Credits: 6
- Elective Credits: 8
- ENGL 306 - Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
or
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3

Senior Year - Total Hours: 30

- Concentration 4 \& 5 Credits: 6
- Electives Credits: 9
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Creative Concentration - Credits: 39

(At least 21 credits from the following): 9 credits from:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3


## Degree Completion in Four Years English: Creative Writing (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- PESM Activity Credits: 1
- Concentration Course Credits: 3
- Liberal Studies Credits: 21
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 29

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 13
- PESM Activity Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3 or
- ENGL 340 - Creative Writing: Poetry Credits: 3

Junior Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 6
- Concentration 2, 3 Credits: 6
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 310-Auto/Biographical Writing Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3


## Senior Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Concentration 4, 5 Credits: 6
- ENGL 310 - Auto/Biographical Writing Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Requirements for Internships

Internships with local and national organizations and industries enable students to acquire relevant experience in their areas of academic preparation. English majors with a QPA of 2.500 overall and 3.000 in their major courses are eligible.

## Minor in Literature

## Requirements for the Minor

18 credits are required for a minor in English, with a focus either on literature or on writing.

## 12 Credits From the Following Required Courses:

- ENGL 312 - Shakespeare Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 403 - Literary Criticism Credits: 3


## 3 Credits of the Following Required Courses:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- ENGL 402 - World Literature Credits: 3


## 6 Credits of English Electives

(excluding ENGL 099, 101, 103, 210)

## Minor in Writing

## Requirements for the Minor

## 12 Hours From the Following Required Courses:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 305 - Practicum: Teaching Writing Credits: 3
- ENGL 306-Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## 3 Credits of the Following Required Courses

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332-Traditional Grammar Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3


## 6 Credits of English Electives

(excluding ENGL 009, 101, 103, 210)

## History

212 Spotts World Culture Building
724-738-2053

## Chair

John Nichols

## Secretary

Charlene Winslow

## Faculty

John Craig, Margaret Denning, David Dixon, Jaclyn Gier, Alan Levy, Michael Matambanadzo, Thomas Pearcy, Larry Rotge, Carlis White
"I can truly say that the preparation by the history department at Slippery Rock has served me quite well over the years, and for that, I am profoundly grateful."

Deborah K. Kennedy<br>Teacher and former Robert D. Duncan Memorial Awardee

History is a discipline that supports the liberal arts concentrations in the humanities and the social and behavioral sciences. Its aim is to place men and women and their achievements in the proper perspective of western heritage and the heritage of other cultures. The concentration in history is designed to develop a knowledge of the past with special emphasis on an understanding of contemporary problems. The key to historical scholarship consists of the exercise of critical analysis in order to evaluate and discover the comparative significance of human beings and events.

History majors or social science majors with a concentration in history enter careers in business, government agencies and education or pursue graduate work in history, law, and other professional schools. Students regularly complete internships at the Old Stone House, local historical societies, colonial forts in Western Pennsylvania, and other historical sites in the United States. History students frequently take courses in foreign countries offered by SRU history faculty.

## Education - History Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teaching certification in social studies with an emphasis in history are available in the Department of History or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building Room 105.

## History (BA)

## Requirements for the Major - Credits: 36

## Required Courses - Credits: 15

Historical Method (205) required of students entering the program after July 1992.

Two of the Following:

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3

Two of the Following:

- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3


## Distributional Electives - Credits: 21

Nine credits in one area and six in each of two others from the following:

## American History

- HIST 233 - African American History to 1876 Credits: 3
- HIST 234 - African American History Since 1876 Credits: 3
- HIST 237 - Outstanding Americans Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 337 - Indians of the United States Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 344 - The American City Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 351 - Latin America to 1830 Credits: 3
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 357 - Challenges of the American Experience I (to 1865) Credits: 3
- HIST 358 - Challenges of the American Experience II (1865 to the e Present) Credits: 3
- HIST 435 - Pennsylvania Credits: 3
- HIST 437 - Westward Movement Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HIST 451 - U.S. Foreign Relations to 1890 Credits: 3
- HIST 452 - U.S. Foreign Relations Since 1890 Credits: 3
- HIST 453-American Constitutional History and Law Credits: 3
- HIST 455 - Economic U.S. History Credits: 3


## Non-Western History

- HIST 286 - Modern Japan Credits: 3
- HIST 362 - Africa North of the Zambezi Credits: 3
- HIST 363 - Southern Africa Credits: 3
- HIST 370 - History and the Bible Credits: 3
- HIST 371 - History of Jews Credits: 3
- HIST 380 - Egyptology Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- HIST 462 - The Contemporary Middle East Credits: 3


## European History

- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 305 - Russia to 1855 Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3
- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since 1689 Credits: 3
- HIST 422 - Greece and Rome Credits: 3
- HIST 424 - The Middle Ages Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3
- HIST 427 - Nineteenth Century Europe Credits: 3


## Degree Completion in Four Years History (BA)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- PESM Activity - Credits: 1
- CHEM 104 - Introduction Chemistry I Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
- G\&ES 202 - United States and Canada Credits: 3
- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 201 - Colonial America to 1825 Credits: 3
- PSYC 100 - Psychology Applied Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3
- THEA 141 - Introduction to the Theatre Credits: 3

Sophomore Year - Total Hours: 31

- ART 112 - Basic Studio Ceramics Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3
- HIST 205 - Historians Craft Credits: 3
- HIST 286 - Modern Japan Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- SPAN 102 - Spanish Language \& Culture II Credits: 3


## Junior Year - Total Hours: 30

- BIOL 101 - General Biology Credits: 3
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 370 - History and the Bible Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- SASW 105 - Human Diversity Credits: 3
- SASW 106 - Race and Ethnic Diversity in the U.S.A. Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3


## Senior Year - Total Hours: 28

- PHIL 323 - Credits: 3
- Internship - Credits: 6
- Electives - Credits: 13
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 437 - Westward Movement Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3


## Minor in History

## Requirements for the Minor - Credits: 18

Students must successfully complete 18 credits in one of the following minors:

## American History:

6 Credits from the Following

- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3


## 9 Credits from the Following

- 6 credits must be 300 level or above;
- A 3 credit free elective in history.
- HIST 233 - African American History to 1876 Credits: 3 or
- HIST 234 - African American History Since 1876 Credits: 3
- HIST 237 - Outstanding Americans Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 337 - Indians of the United States Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 344 - The American City Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 351 - Latin America to 1830 Credits: 3
or
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 357 - Challenges of the American Experience I (to 1865) Credits: 3
- HIST 358 - Challenges of the American Experience II (1865 to the e Present) Credits: 3
- HIST 435 - Pennsylvania Credits: 3
- HIST 437 - Westward Movement Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HIST 451 - U.S. Foreign Relations to 1890 Credits: 3
or
- HIST 452 - U.S. Foreign Relations Since 1890 Credits: 3
- HIST 453 - American Constitutional History and Law Credits: 3
- HIST 455 - Economic U.S. History Credits: 3


## European History:

## 6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3


## 9 Credits from the Following

- A 3 credit free elective in history.
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 305 - Russia to 1855 Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3
- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since 1689 Credits: 3
- HIST 422 - Greece and Rome Credits: 3
- HIST 424 - The Middle Ages Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3
- HIST 427 - Nineteenth Century Europe Credits: 3


## General History:

- 9 credits from 100 and 200 level history courses;
- 9 credits of electives in history at the 300 level or above.


## Military History:

6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3


## 12 Credits from the Following

- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3


## Non-Western History:

- A 3 credit free elective in history.


## 6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3

9 Credits from the Following

- HIST 286 - Modern Japan Credits: 3
- HIST 362 - Africa North of the Zambezi Credits: 3 or
- HIST 363 - Southern Africa Credits: 3
- HIST 370 - History and the Bible Credits: 3
- HIST 371 - History of Jews Credits: 3
- HIST 380 - Egyptology Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- HIST 462 - The Contemporary Middle East Credits: 3


# Modern Languages and Cultures 

Carruth-Rizza Hall<br>724-738-2062

Chair<br>Melinda Ristvey

## Secretary

Karen Hogg

## Faculty


#### Abstract

Ana Caula, Deborah Cohen, Thomas Daddesio, Augustin Martinez-Samos, Charles Tichy, Melinda Ristvey, Eva Tsuquiashi-Daddesio

Courses in modern languages not only develop linguistic skills but also help students understand the culture of the country whose language they are studying. Knowledge of the world language helps persons to broaden their horizons. It develops intellectual curiosity, world knowledge, the ability to express oneself, and the capacity to enrich one's enjoyment of the many aspects of world cultures.


Students of modern languages may look forward to careers in business, government, journalism, education, interpreting, or translating. Students are encouraged to discuss their career goals with the departmental chairperson, and/or advisor. Interested students are welcome to participate in the Russian Club, the Spanish Club, the French Club, or the German Club.

Students with previous language experience must take an appropriate modern language placement test to determine course eligibility. Students desiring to receive academic credit for previous experience must take the appropriate CLEP examination administered by the university. The CLEP examination must be taken before enrollment in foreign language courses and for freshmen within the first few weeks of the semester.

## Chinese

Chinese 101, 102 and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline

## German

German 101, 102 and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline.

## Italian

Italian 101, 102 and 103 satisfy the liberal arts language requirements for the bachelor of arts degree in any discipline.

## Japanese

Japanese 101, 102 and 103 satisfy the liberal arts language requirements for the bachelor of arts degree in any discipline.

## Korean

Korean 101, 102 and 103 satisfy the liberal arts language requirements for the bachelor of arts degree in any discipline.

## Russian

Russian 101, 102 and 103 satisfy the liberal arts requirement for the bachelor of arts degree in any discipline.

## Education - French Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in French are available from the Department of Modern Languages and Cultures or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## Education - Spanish Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in Spanish are available in the Department of Modern Languages and Cultures or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## French (BA)

The study of French language and culture is a passport to the past, the present, and the future. With it the student can go back in time to the dawn of French civilization and follow its development from before the Gallo-Roman period through the Middle Ages, with the flowering of the great cathedrals, into the Renaissance graced by its many chateaux, and on to the glories of imperial France under Louis XIV. Armed with knowledge of French, the student will better understand also the Enlightenment, whose numerous great French philosophers carved out the principle of both the American and the French revolutions, and the developments which followed them, bringing the modern world into being. The passport of French studies will also serve to open doors for the student in today's world where French is a principal language in 43 countries and where knowledge of French is constantly needed in critical diplomatic situations. France will most surely maintain its political and commercial leadership in the world as it enters the 21st century.

Students have the opportunity to participate in the French Club and Pi Delta Phi, the French honorary society. Majors obtain jobs in teaching, health and human services professions, international business and business-related professions, communication, and technology-related fields.

Students with previous French language experience must take the modern languages placement test to determine course eligibility. Students desiring to receive academic credit for previous experience must take the appropriate CLEP examination administered by the university. The CLEP examination must be taken before enrollment in foreign language courses for freshmen within the first few weeks of the semester.

French 101, 102, and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline.

## Requirements for the Major - Credits: 24-39

## Required Courses

- 6 credits of any 300 - or 400 -level French course may be chosen as an elective
- FREN 101 - French Language and Culture I Credits: 3
- FREN 102 - French Language and Culture II Credits: 0
- FREN 103 - French Language and Culture III Credits: 0
- FREN 201 - Communicating in French Credits: 3
- FREN 220 - Reading in French Credits: 3
(* see footnote)
- FREN 300 - French Grammar Review Credits: 3
- FREN 301 - Developing French Vocabulary \& Conversation Skills Credits: 3 or FREN 401 - Advanced Oral Communication Skills
- FREN 305 - French Civilization Credits: 3
- FREN 306 - Modern France Credits: 3
- FREN 320 - Main Currents in French Literature Credits: 3
- FREN 350 - French Linguistics and Phonetics Credits: 3
- FREN 400 - Advanced French Grammar Credits: 3
- FREN 401 - Advanced Oral Communication Skills Credits: 3 or FREN 301 - Developing French Vocabulary \& Conversation Skills


## Footnote

* These credits may be exempted through a department placement exam, AP credits or CLEP credits. Native speakers should consult the Department of Modern Languages and Cultures.


## Degree Completion in Four Years French (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 32

- PESM Activity - Credits: 1
- Liberal Studies - Credits: 12
- Electives - Credits: 6 (** see footnotes)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- FREN 102 - French Language and Culture II Credits: 0 (* see footnotes)
- FREN 103 - French Language and Culture III Credits: 0
- PE 141 - Personal Physical Fitness Credits: 1


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 6
- Electives - Credits: 9
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- FREN 201 - Communicating in French Credits: 3
- FREN 220 - Reading in French Credits: 3


## Junior Year - Total Hours: 33

- Liberal Studies - Credits: 9
- Electives - Credits: 12
- FREN 300 - French Grammar Review Credits: 3
- FREN 301 - Developing French Vocabulary \& Conversation Skills Credits: 3 or FREN 401 - Advanced Oral Communication Skills
- FREN 305 - French Civilization Credits: 3
- FREN 350 - French Linguistics and Phonetics Credits: 3
- FREN 401 - Advanced Oral Communication Skills Credits: 3
or FREN 301 - Developing French Vocabulary \& Conversation Skills


## Senior Year - Total Hours: 25

- FREN Literature (2) - Credits: 6
- FREN Electives - Credits: 6
- Liberal Studies - Credits: 3
- Electives - Credits: 7
- FREN 400 - Advanced French Grammar Credits: 3


## Footnotes

* Most students enter the major with at least three years of high school French and are able to exempt the 101 level. Some students are able to place higher which will allow them ample time to complete a second major or minor within a four-year sequence.
** Most of our BA candidates combine French with a second major or minor. Depending on what second major may be chosen, several of the courses from the second major may be counted in the liberal studies program as well.
*** A semester study abroad experience is highly recommended.


## Specialization: International Business

This program is designed for students who prefer the flexibility of a liberal arts program while studying the international market. Such a student may decide to enter an MBA program designed specifically for the liberal arts language major. Specific requirements for the specialization in international business are available from the Department of Modern Languages and Cultures.

## Minor in East Asian Studies

## Coordinator

George Brown

## Faculty

Nora Ambrosio, George Brown, Margaret Denning, Alison McNeal, J. Sunita Peacock, Rachela Permenter, Carolyn Prorok, David Skeele

The interdisciplinary East Asian Studies minor offers students the opportunity to gain a working knowledge of the countries that share the Pacific Ocean with the United States. East Asian countries are those modern cultures which draw their most prominent characteristics from ancient China, which has the oldest surviving civilization in the world. Japan, the Koreas, Vietnam, and China are the major "East Asian" nations today, but there are significant populations in other parts of the world of people whose traditions are East Asian (Indonesia and Malaysia being important examples). Over one quarter of the people residing on the globe live in the area called East Asia, which contains the most rapidly industrializing and fastest growing economies in the world.

The East Asian Studies minor provides a valuable focus for majors in many fields. Business majors will find a minor in East Asian Studies particularly attractive to future employers who are already doing business in the region or who wish to begin trade there. Future teachers and social workers as well as health and fitness professionals will find the background useful in their work with the increasing Asian population in the United States (Asians and Pacific Islanders are the fastest growing minority in America). Students with majors in the humanities and social sciences will find the minor a valuable balance to the largely Western content and methodologies that characterize their fields of study.

Students may chose between two tracks in the minor. One track requires no competency in an East Asian language and the other track is for those who want to demonstrate proficiency in either Chinese, Japanese, or Korean.

## Requirements for the Minor

## Without a Language Requirement - Credits: 18

No more than three credits may be in languages and at least two courses must be at or above the 300 level.

- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- G\&ES 303 - Asia Credits: 3
- HIST 286 - Modern Japan Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3

And

- CHIN 101 - Chinese Language and Culture I Credits: 3
- CHIN 102 - Chinese Language and Culture II Credits: 0
- CHIN 103 - Chinese Language and Culture III Credits: 0
- CHIN 202 - Intermediate Chinese I Credits: 3

Or

- KORN 101 - Korean Language and Culture I Credits: 3
- KORN 102 - Korean Language and Culture II Credits: 3
- KORN 103 - Korean Language and Culture III Credits: 3
- KORN 202 - Intermediate Korean I Credits: 3

Or

- JAPN 101 - Japanese language Culture I Credits: 3
- JAPN 102 - Japanese language Culture II Credits: 3
- JAPN 103 - Japanese language Culture III Credits: 3
- JAPN 202 - Intermediate Japanese I Credits: 3


## With a Language Requirement - Credits: 21

Students must attain at least third semester proficiency in either Chinese, Japanese, or Korean. At least three courses must be non-language courses. At least two of these courses must be at or above the 300 level.

- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- G\&ES 303-Asia Credits: 3
- HIST 286 - Modern Japan Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3

And

- CHIN 101 - Chinese Language and Culture I Credits: 3
- CHIN 102 - Chinese Language and Culture II Credits: 0
- CHIN 103 - Chinese Language and Culture III Credits: 0
- CHIN 202 - Intermediate Chinese I Credits: 3

Or

- KORN 101 - Korean Language and Culture I Credits: 3
- KORN 102 - Korean Language and Culture II Credits: 3
- KORN 103 - Korean Language and Culture III Credits: 3
- KORN 202 - Intermediate Korean I Credits: 3

Or

- JAPN 101 - Japanese language Culture I Credits: 3
- JAPN 102 - Japanese language Culture II Credits: 3
- JAPN 103 - Japanese language Culture III Credits: 3
- JAPN 202 - Intermediate Japanese I Credits: 3


## Minor in Finance

Students pursuing a minor in finance must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3


## Minor in French

## Requirements for the Minor - Credits: 18

Eighteen credits of French courses above the 101 level, including a minimum of two 300-level courses.

## Minor in German

## Requirements for the Minor - Credits: 18

Two courses at the 300 level and the following:

- GERM 102 - German Language and Culture II Credits: 0
- GERM 103 - German Language and Culture III Credits: 0
- GERM 201 - Communication in German Credits: 3
- GERM 210 - German Literature in Translation Credits: 3


## Minor in Russian

## Requirements for the Minor

Russian 101, 102 and 103 satisfy the liberal arts requirement for the bachelor of arts degree in any discipline.

- RUSS 101 - Russian Language and Culture I Credits: 3
- RUSS 102 - Russian Language and Culture II Credits: 3
- RUSS 103 - Russian Language and Culture III Credits: 3
- RUSS 202 - Intermediate Russian I Credits: 3
- RUSS 305 - Russian Civilization via Film Credits: 3
- RUSS 306-20th Century Russian Legacy Credits: 3


## Minor in Spanish

## Requirements for the Minor - Credits: 18-21

18-21 credits of Spanish classes including 6 credits from the 300 level

## Minor in Spanish for Elementary Education

## Requirements for the Minor - Credits: 18

Any additional credits necessary to reach 18 hours if beginning courses were exempt.

- SPAN 101 - Spanish Language \& Culture I Credits: 3
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3
- SPAN 200 - Intermediate Spanish Grammar Credits: 3
- SPAN 201 - Communicating in Spanish Credits: 3
- SPAN 302 - Communication in Spanish for the Elementary Classroom Credits: 3
- SPAN 309 - Hispanic Civilizatin for the Elementary Classroom Credits: 3
- SPAN 318 - Hispanic Literary Heritage Credits: 3


## Spanish (BA)

Why study Spanish? There are many substantive reasons, but an important one is that Hispanics are the fastest growing segment of the U.S. population. Therefore, the knowledge of Spanish is of value in all human services professions, as well as in many areas of business, especially since Latin America represents a large potential market. Because Spanish can become an invaluable skill in an occupation, many students choose to combine Spanish with another area as a double major or as a minor.

Students with previous language experience must take the modern language Spanish placement test to determine course eligibility. Students desiring to receive academic credit for previous experience must take the appropriate CLEP examination administered by the university. The CLEP examination must be taken before enrollment in world language courses and for freshmen within the first few weeks of the semester.

Spanish 101, 102, and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline.
Requirements for the Major - Credits: 27-45

## Required Courses:

- SPAN 101 - Spanish Language \& Culture I Credits: 3
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3
- SPAN 200 - Intermediate Spanish Grammar Credits: 3
- SPAN 201 - Communicating in Spanish Credits: 3
- SPAN 220 - Reading in Spanish Credits: 3

Some or all of these credits may be exempted through a department placement exam, AP credits or CLEP credits. Heritage speakers are exempt from certain courses and should consult the Department of Modern Languages and Cultures for specific requirements.

- SPAN 300 - Spanish Grammar Review Credits: 3
- SPAN 301 - Intermediate Spanish Communication Credits: 3
- SPAN 401 - Advanced Oral Communication Credits: 3

One of following civilization courses:

- SPAN 305 - Spanish Civilization Credits: 3
- SPAN 306-The Civilzation of South America Credits: 3
- SPAN 307 - U.S. Spanish-Speaking Minority Cultures Credits: 3
- SPAN 308 - The Civilzation of Mexico and Central America Credits: 3

One of the following literature survey courses:

- SPAN 330 - Spanish Literature - Gen. Of 98 to Present Credits: 3
- SPAN 332 - Spanish-American Literature - 20th Century and Beyond Credits: 3

One of the following literature courses:

- SPAN 431 - Spanish Literature - Medieval to 18th Century Credits: 3
- SPAN 432 - Spanish-American Literature Pre-Columbian to 19th Century Credits: 3

6 credits of Spanish electives at 300- or 400-level (except Spanish 302 and 309)

## Specialization: International Business

This program is designed for students who prefer the flexibility of a liberal arts program while studying the international market. Such a student may decide to enter an MBA program designed specifically for the liberal arts language major. Specific requirements for the specialization in international business are available from the Department of Modern Languages and Cultures.

## Degree Completion in Four Years Spanish (BA)

Completion Hours: $\mathbf{1 2 0}$

## Freshman Year - Total Hours: 32

- PESM Activity Credits: 1
- Liberal Studies Credits: 12
- Electives Credits: 6
(** See footnote)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- SPAN 102 - Spanish Language \& Culture II Credits: 3 (* See footnote)
- SPAN 103 - Spanish Language \& Culture III Credits: 3


## Sophomore Year - Total Hours: 33

- Liberal Studies Credits: 6
- Electives Credits: 9
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- SPAN 201 - Communicating in Spanish Credits: 3
- SPAN 220 - Reading in Spanish Credits: 3
- SPAN 300 - Spanish Grammar Review Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies Credits: 9
- Electives Credits: 12
- SPAN 300 - Spanish Grammar Review Credits: 3
- SPAN 301 - Intermediate Spanish Communication Credits: 3
- SPAN 305 - Spanish Civilization Credits: 3
- SPAN 401 - Advanced Oral Communication Credits: 3


## Senior Year - Total Hours: 25

- SPAN Literature (2) Credits: 6
- SPAN Electives Credits: 6
- Liberal Studies Credits: 3
- Electives Credits: 7
- SPAN 400 - Advanced Spanish Grammar Credits: 3


## Footnotes

* Most students enter the major with at least three years of high school Spanish and are able to exempt the 101 level. Some students are able to place higher, which allows ample time to complete a second major or minor within a fouryear sequence.
** Most of our BA candidates combine Spanish with a second major or minor. Depending on what second major may be chosen, several of the courses from the second major may be counted in the liberal studies program as well.
*** A semester study abroad experience is highly recommended.


## Music

225 Swope Music Hall
724-738-2063

## Chair

Maribeth Knaub
Musician
Kelly Hiser

## Secretary

Barbara Frankenburg

## Faculty

James Berry, Warren Davidson, David Glover, Susan Hadley, Mechelle Hawk, Stephen Hawk, Maribeth Knaub, Matthew Litterini, Jeff Mangone, Patrick Myers, Colleen Neubert, Gary Purifoy, Sue Shuttleworth, Kevin Smith, Nanette Solomon, Stacey Steele, Terry Steele, Paula Tuttle, Glenn Utsch
"The contract for my first job was signed and approved a month before I graduated because Slippery Rock University prepared me to teach, to learn, and to live as a competent, productive citizen. Five years later, I am happily and successfully teaching music and directing high school bands in the same school district."

## Tonia Asel '95 <br> Music Education/Performance Major

The Department of Music offers students the opportunity to focus their studies on education, therapy, performance, or a combination of these majors. Courses include study in applied music performance, music literature, music theory and composition, music education, music therapy and a variety of instrumental and vocal performing ensembles. Students electing courses in music will develop performance skills and interests and a greater perception of their musical heritage and environment. The music major may look forward to careers in private teaching, performance, music education, or music therapy.

Mu Phi Epsilon is an international, professional music fraternity that seeks to advance music in America and throughout the world, the promotion of musicianship and scholarship, loyalty to the Alma mater, and the development of true bonds of friendship. Election to Mu Phi Epsilon is based upon scholarship, musicianship, character and personality. Membership is offered to music majors and minors who are in their second semester and have attained specific standards in the above areas. The Delta Mu chapter at SRU, founded in 1994, sponsors concerts and provides many services within the music department.

## Minor in Music

Students may pursue a minor in music after passing an audition before the music faculty. The curriculum, determined through advisement, consists of 25 credits of music courses.

## Requirements for the Minor in Music - Credits: 25

## Music (BA)

## Requirements for the Major - Credits: 40

All prospective music majors must audition with a faculty committee from the Department of Music.

## Required Music Courses - Credits: 40

- Applied Major - Semesters: 7 (* see footnote)
- Ensemble - Semesters: 7 (* see footnote)
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## Footnote

* See chairperson of Department of Music for an explanation of this requirement.


## Modern Language Requirement

All candidates for the bachelor of arts degree must demonstrate competency in a modern language at the 103 level through either coursework or placement tests.

## Music (BM)

Total Degree Credits: 120

## Specialization: Performance

## Requirements for Music (BM) - Credits: 78

Required Courses - Credits: 30

- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 299 - Diction for Singers Credits: 1 (voice majors only)
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350-Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 431 - Pedagogy Credits: 1
- MUSI 473 - History of Music III Credits: 3


## Electives - Credits: 13

Selected from the following:

- MUSI 128 - Applied Alexander Technique Credits: 1
- MUSI 134 - Class Voice II Credits: 1
- MUSI 135 - Class Strings Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 233 - Chamber Music Performance Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 246 - Class Woodwinds Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 389 - Applied Composition Credits: 1
- MUSI 499 - Applied Recital Credits: 1
* Applied Major - Credits: 24
* see footnote
* Applied Minor - Credits: 4
* see footnote
* see footnote
* Ensemble - Semesters: 8
* see footnote


## Footnote

* See chairperson of Department of Music for an explanation of these requirements.


## Music Education (BS)

The Department of Music offers an undergraduate program in music education which meets requirements for the National Association Schools of Music (NASM) and state certification in music, grades K-12. Prospective music teachers are required to take coursework that is balanced to offer a broad education, including courses in music, music performance, professional education, and liberal studies. Students are required to complete 40 contact hours in elementary and secondary music education settings during the freshman and sophomore years. The junior and senior years allow the students the opportunity to apply the philosophies, methodologies, and techniques that they have observed and discussed in classes. For four weeks during field experience and sixteen weeks of student teaching, students will observe, assist and teach in a public school setting.

Music Education students are encouraged to join the Pennsylvania Collegiate Music Educators Association (PCMEA). The PCMEA meets monthly, offers workshops and conferences and promotes pre-professional experiences for the music education major.

Requirements for acceptance to the Teacher Certification Programs during the sophomore or junior year may include but also exceed the following: completion of 48 credit hours; minimum QPA requirements for Basic Competency courses, music education program, and cumulative QPA; passing scores on Praxis exams; completion of 40 hours of observations in educational settings; evidence of professional conduct; criminal and child abuse background checks; and a TB test.

The guidelines on admission, professional conduct, and student teaching for this department include and may go beyond those required for the College of Education as a whole. Details are available in the Department of Music or from the student's advisor. See also the Programs for Certification of Professional School Personnel and the Teacher Education Policy Manual, available in 105 McKay Education Building.

The double majors, BM in Performance/BS in Music Education, the BM in Performance/BS in Music Therapy, the BS in Music Education/BS in Music Therapy are available for students who wish to pursue combined degrees. Please see Chairperson for the semester by semester schedule.

## Requirements for the Major - Credits: 61

All prospective music education majors must audition with a faculty committee of the Department of Music.

## Required Music Courses

- Applied Major (7 credits)
* see footnote
- Applied Minor (4 credits)
* see footnote
- Ensemble (7 credits)
* see footnote
- MUSI 133 - Class Voice I Credits: 1 instrumental majors only
- MUSI 134 - Class Voice II Credits: 1
- MUSI 135 - Class Strings Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 246 - Class Woodwinds Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 299 - Diction for Singers Credits: 1 voice majors only
- MUSI 300 - Marching Band Field Charting Credits: 1
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 334 - Secondary School Music Credits: 2
- MUSI 335 - Elementary Music Methods Credits: 2
- MUSI 336 - Instrumental Methods Credits: 2
- MUSI 337 - Instrumental Rehearsal Techniques Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1


## Other Courses Required

- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3 or SEFE 380 - History and Philosophy of Education
- MUSI 455 - Student Teaching - Music Credits: 12, 6, 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3 or CEDP 342 - Educational Psychology


## Footnote

* See chairperson of Department of Music for an explanation of this requirement.


## Degree Completion in Four Years Music Education (BS MusEd)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 or higher
- MUSI 131 - Class Piano I Credits: 1
- MUSI 132 - Class Piano II Credits: 1
- MUSI 133 - Class Voice I Credits: 1
- MUSI 134 - Class Voice II Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1

One of the Following Courses

- MUSI 179 - Applied Music Credits: 1
- MUSI 181 - Applied Voice Credits: 1
- MUSI 182 - Applied Strings Credits: 1
- MUSI 183 - Applied Brass Credits: 1
- MUSI 184 - Applied Woodwinds Credits: 1
- MUSI 185 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1

Sophomore Year - Total Hours: 30

- CDEV 248 - Human Development and Education Credits: 3
- COMM 200-Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MUSI 234 - Class Piano III Credits: 1
- MUSI 235 - Class Piano IV Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- SEFE 200 - Introduction to Education Credits: 3


## One of the Following Courses

- MUSI 279
- MUSI 281
- MUSI 282
- MUSI 283
- MUSI 284
- MUSI 285
- MUSI 279 - Applied Piano Credits: 1
- MUSI 281 - Applied Voice Credits: 1
- MUSI 282 - Applied Strings Credits: 1
- MUSI 283 - Applied Brass Credits: 1
- MUSI 284 - Applied Woodwinds Credits: 1
- MUSI 285 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1

Junior Year- Total Hours: 30

- PESM - Credits: 2
- Liberal Studies - Credits: 3
- MUSI 135 - Class Strings Credits: 1
- MUSI 300 - Marching Band Field Charting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 334 - Secondary School Music Credits: 2
- MUSI 335 - Elementary Music Methods Credits: 2
- MUSI 336 - Instrumental Methods Credits: 2
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## One of the Following Courses

- MUSI 379 - Applied Piano Credits: 1
- MUSI 381 - Applied Voice Credits: 1
- MUSI 382 - Applied Strings Credits: 1
- MUSI 383 - Applied Brass Credits: 1
- MUSI 384 - Applied Woodwinds Credits: 1
- MUSI 385 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Senior Year- Total Hours: 30

- Liberal Studies - Credits: 12
- CDEV 342 - Educational Psychology Credits: 3 or SEFE 380 - History and Philosophy in Education
- MUSI 337 - Instrumental Rehearsal Techniques Credits: 1
- MUSI 455 - Student Teaching - Music Credits: 12, 6, 3
- SEFE 380 - History and Philosophy of Education Credits: 3 or CEDP 342 - Educational Psychology

One of the Following Courses

- MUSI 479 - Applied Piano Credits: 1
- MUSI 481 - Applied Voice Credits: 1
- MUSI 482 - Applied Strings Credits: 1
- MUSI 483 - Applied Brass Credits: 1
- MUSI 484 - Applied Woodwinds Credits: 1
- MUSI 485 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Music Therapy (BS)

Music therapy is a field that uses music along with the personality of the therapist as a treatment for rehabilitating, maintaining, and improving the lives of persons with physical, intellectual, and emotional disabilities. As a member of
the therapeutic team, the music therapist participates in assessing problems, setting treatment goals, and planning and carrying out music experiences to meet these goals.

Career opportunities are available for music therapists in rehabilitation centers, hospitals, community mental health clinics, nursing homes, day care centers, and correctional facilities. Some music therapists establish their own private studios, usually working with clients referred by local health professionals. In addition, some public school systems are beginning to include music therapists in their special education programs.

Music therapy students can be involved in the campus Music Therapy Club, which promotes the profession, offers workshops for members and other interested students, and organizes service projects. Club members also participate in both the regional and national professional student organizations of the American Music Therapy Association. Through this involvement they have opportunities for leadership, scholarships, and participation at professional conferences.

Music therapy students have the opportunity to take field trips and observe music therapy clinical work in their freshman year. Six semesters of further clinical experience in a variety of community settings provide practical application of music therapy course work. A senior practicum course provides an opportunity to mentor and supervise beginning music therapy students in the clinical experience. A required six-month music therapy internship culminates the educational program with placement opportunities in approximately 150 clinical settings throughout the United States. Professional music therapists supervise the internship programs, which meet the training requirements of the American Music Therapy Association. Students may select an internship in settings such as hospitals, clinics, day care facilities, schools, community mental health centers, substance abuse facilities, nursing homes, hospice, rehabilitation centers, and correctional facilities. Several Slippery Rock University alumni have found employment at their internship facility.

The double majors, BM in Performance/BS in Music Education, the BM in Performance/BS in Music Therapy, the BS in Music Education/BS in Music Therapy are available for students who wish to pursue combined degrees. Please see Chairperson for the semester by semester schedule.

## Requirements for the Major - Credits: 73

All prospective music therapy majors must audition with a faculty committee of the Department of Music.

## Required Music Courses - Credits: 52

- Applied Major (7 credits) (* see footnote)
- Applied Minor (6 credits) (* see footnote)
- Ensemble (7 credits)
(* see footnote)
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350-Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## Required Music Therapy Courses - Credits: 21

- MUSI 127 - Orientation to Music Therapy Credits: 1
- MUSI 199 - Fundamental Skills in Music Therapy Credits: 1
- MUSI 228 - Therapeutic Musical Strategies Credits: 1
- MUSI 236 - Behavioral Techniques in Music Therapy Credits: 2
- MUSI 312 - Music Therapy for Children Credits: 3
- MUSI 327 - Psychology of Music Credits: 3
- MUSI 428 - Music Therapy Practicum Credits: 3
- MUSI 433 - Clinical Integration Credits: 1 six semesters of clinical experience are required
- MUSI 440 - Music Therapy for Adult Clients Credits: 3
- MUSI 450 - Music Therapy Internship Credits: 3 to 12


## Other Courses Required by the American Music Therapy Association

3 credits from SASW, PSYC 100 or 105, 376, and 3 additional credits of psychology.

- BIOL 216 - Anatomy and Physiology Credits: 3
or
- BIOL 217 - Anatomy and Physiology Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3


## Footnote

* See chairperson of Department of Music for an explanation of these requirements.


## Degree Completion in Four Years Music Therapy (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 33

- PESM 141- Personal Physical Fitness Credits: 1 \& PESM \& Dance Activity
- SASW Credits: 3
- Liberal Studies - Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MUSI 127 - Orientation to Music Therapy Credits: 1
- MUSI 131 - Class Piano I Credits: 1
- MUSI 132 - Class Piano II Credits: 1
- MUSI 133-Class Voice I Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 199 - Fundamental Skills in Music Therapy Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- PSYC 100 - Psychology Applied Credits: 3
or
- PSYC 105 - Introduction to Psychology Credits: 3

One of the Following Courses

- MUSI 179 - Applied Music Credits: 1
- MUSI 181 - Applied Voice Credits: 1
- MUSI 182 - Applied Strings Credits: 1
- MUSI 183 - Applied Brass Credits: 1
- MUSI 184 - Applied Woodwinds Credits: 1
- MUSI 185 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Sophomore Year - Total Hours: 31

- Liberal Studies - Credits: 6
- COMM 200 - Public Speaking Credits: 3
- MUSI 228 - Therapeutic Musical Strategies Credits: 1
- MUSI 234 - Class Piano III Credits: 1
- MUSI 235 - Class Piano IV Credits: 1
- MUSI 236 - Behavioral Techniques in Music Therapy Credits: 2
- MUSI 247 - Class Percussion Credits: 1
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3


## One of the Following Courses

- MUSI 279 - Applied Piano Credits: 1
- MUSI 281 - Applied Voice Credits: 1
- MUSI 282 - Applied Strings Credits: 1
- MUSI 283 - Applied Brass Credits: 1
- MUSI 284 - Applied Woodwinds Credits: 1
- MUSI 285 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Summer I

- Liberal Studies - Anatomy - Credits: 6

Junior Year - Total Hours: 32

- Applied Voice (minor applied lesson) - Credits: 2
- Liberal Studies (Psych) - Credits: 6
- MUSI 312 - Music Therapy for Children Credits: 3
- MUSI 327 - Psychology of Music Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## One of the Following Courses

- MUSI 379 - Applied Piano Credits: 1
- MUSI 381 - Applied Voice Credits: 1
- MUSI 382 - Applied Strings Credits: 1
- MUSI 383 - Applied Brass Credits: 1
- MUSI 384 - Applied Woodwinds Credits: 1
- MUSI 385-Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Senior Year - Total Hours: 18

- Liberal Studies - Credits: 3
- MUSI 428 - Music Therapy Practicum Credits: 3
- MUSI 433-Clinical Integration Credits: 1
- MUSI 440 - Music Therapy for Adult Clients Credits: 3
- MUSI 450 - Music Therapy Internship Credits: 3 to 12
- PSYC 276 - Abnormal Behavior Credits: 3


## One of the Following Courses

- MUSI 479 - Applied Piano Credits: 1
- MUSI 481 - Applied Voice Credits: 1
- MUSI 482 - Applied Strings Credits: 1
- MUSI 483 - Applied Brass Credits: 1
- MUSI 484 - Applied Woodwinds Credits: 1
- MUSI 485 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Philosophy

003 Spotts World Culture Building
724-738-2071

## Chair

Richard Findler

## Secretary

Carol Dickey

## Faculty

Richard Findler, Bernard Freydberg, William Oman, Bradley Wilson
"Much of the success I've had as a first-year law student is attributable to the analytic and argumentative skills I've developed as a student in the Slippery Rock University Philosophy Department."
"I wanted more than just a degree and a job; I wanted to understand the world and my place in it in a more meaningful way. Members of the department have continued to advise me and be gracious to me and my family over the years."

Dr. James Highland
Class of ' 92
Philosophy Professor University of Hartford
"A great place to study philosophy. Every SRU instructor was committed to student goals, including putting in overtime..." "numerous examples of kindness and generosity on a daily basis."

## Diane Bowser '95 <br> Philosophy Instructor <br> Clarion University (Venango Campus), PA

Philosophy teaches students to inquire in a systematic way into fundamental questions connected with one's relationships to oneself, others, society, and the world. It helps students pull their studies together into a unified project and to think about broader perspectives and implications, which are often lost sight of in specialized study. In particular, philosophy helps students to develop the following critical thinking essential to academic pursuits and intelligent living.

- Analytical thinking: logical skills involving the ability to break down complex ideas and problems into their elements and to perform reasoning tasks efficiently and correctly.
- Evaluative thinking: skills of making intelligent ethical, social, esthetic, and religious value judgments related to fundamental issues in contemporary society and their implications for students' personal and professional lives.
- Synthetic thinking: skills of pulling together a variety of views and perspectives and resolving intellectual and practical conflicts related to the many alternative ideas and voluminous information in both the theoretical and applied spheres.
Philosophy prepares students for advanced studies in its own and in related fields and for many careers which require a high level of logical and linguistic refinement, ethical awareness and the capacity to form interpretive judgments within complex and dynamic social and intellectual environments on a global scale. Because of the strong emphasis on logical reasoning, philosophy majors are coping particularly well with rapid technological change. New roles have opened in health care, government, education, business, environmental fields, technology and scientific research for those with professional training in ethics. Traditionally, philosophical education has been valuable for further study in:
- the humanities, especially in fields which involve language, literature and the arts;
- the sciences, especially in relation to their theoretical foundations and their social impact;
- comparative cultures;
- law and policy studies; and
- business and the helping professions.

Many students combine philosophy with another field. Slippery Rock University's liberal studies program relies extensively on courses in philosophy to afford an important foundation for an undergraduate education.

Students have the opportunity to participate in frequent trips to conferences, join the Philosophy Club and achieve membership in the Philosophy Honorary.

## Certificate of Academic Achievement in Religious Studies

## Requirements for the Certificate - Credits: 18

A minimum of 18 credits, equally divided among courses in humanities and fine arts and in social and behavioral sciences, must be selected from the following:

- SASW 430
- ENGL 248 - Eastern Literature Credits: 3
- G\&ES 242 - Geography of Religion Credits: 3
- HIST 370 - History and the Bible Credits: 3
- PHIL 140 - World Religions Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- PHIL 341 - Philosophy of Religion Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3
- PHIL 375 - Existentialism and Phenomenology Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3


## Minor in Philosophy

## Requirements for the Minor - Credits: 15

This program requires fifteen credits in philosophy with at least nine credits at the 300 level. Courses should be chosen in consultation with a member of the Department of Philosophy.

## Philosophy (BA)

## Requirements for the Major - Credits: 24-39

To meet differing needs of students, there are three tracks which students may pursue toward a degree in philosophy.

## Select One of the Following:

## Specialization: Professional Major

A 39-credit major offers an intensive concentration in philosophy. Primarily for students seeking a career in philosophy with the intention of continuing their studies in graduate school.

Required Courses:

- 3 courses which are 300 level or above (exclusive of required courses). (PHIL 101 may be counted only if taken as one of the first three courses in philosophy.)
- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 123 - Ethics Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 331 - Social and Political Philosophy Credits: 3 or
- PHIL 335 - Philosophy of Law and Justice Credits: 3
- PHIL 351 - Philosophy of Natural Science Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3
- PHIL 490 - Independent Study Credits: 1 to 6


## Specialization: Liberal Arts Major

A 30-credit major which encourages students to focus on philosophy tailored to another academic interest in 1) humanities and fine arts 2) social and behavioral sciences 3) natural sciences and mathematics.

A minimum of 3 courses must be taken in each track. (PHIL 101 may be counted only if taken as a first course in philosophy.)

Required Courses:

- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3


## Required for HFA-track

- PHIL 123 - Ethics Credits: 3


## Required for SBS and NSM tracks

One of:

- PHIL 123 - Ethics Credits: 3
- PHIL 324 - Environmental Ethics Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3
- PHIL 326 - Business Ethics Credits: 3


## Specialization: Career-Related Major

A 24-credit major which allows students to design a program of philosophy courses to complement the student's preparations for a specific career. This is a second major.

The choice of tracks and courses within them should be done in consultation with a member of the philosophy department. Each career track has two further required courses.

Required courses:

- PHIL 113 - Introduction to Logic Credits: 3 or PHIL 313
- PHIL 123 - Ethics Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3 or PHIL 113


## Degree Completion in Four Years Philosophy (BA)

There are many possibilities for degree completion in four years. This is just one sample. Students should consult with advisors.

## Freshman Year - Total Hours: 29

- GERM Credits: 3
- BIOL 100 - Introductory Biology Laboratory Credits: 1
- BIOL 101 - General Biology Credits: 3
- ENGL 101-College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
- HIST 151 - Ancient and Medieval World Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PHIL 101 - Introduction to Philosophy Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 123 - Ethics Credits: 3

Sophomore Year - Total Hours: 30

- ART 225 - Overview of Western Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- GERM 102 - German Language and Culture II Credits: 0
- GERM 103-German Language and Culture III Credits: 0
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PHIL 163 - Philosophy in Literature Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 335 - Philosophy of Law and Justice Credits: 3


## Junior Year - Total Hours: 31

- HIST 201 - Colonial America to 1825 Credits: 3
- MATH 225 - Calculus I Credits: 4
- PHIL 140 - World Religions Credits: 3
- PHIL 170 - American Philosophy Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3

Senior Year - Total Hours: 30

- BIOL 300-Social and Ethical Issues in Genetics Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- ENGL 312 - Shakespeare Credits: 3
- G\&ES 242 - Geography of Religion Credits: 3
- MUSI 105 - Jazz Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3
- PHIL 490 - Independent Study Credits: 1 to 6
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3


## Theatre

300-C Miller Auditorium

724-738-2090

## Chair

Gordon Phetteplace

## Secretary

Lisa Smith

## Technical Director

John Pivetz

## Faculty

Rebecca Morrice, Gordon Phetteplace, David Skeele, Laura Smiley
Studies and experiences in the theatre tap some of the deepest veins of human self-expression and confirm the abiding hold this unique art form has on thoughtful and imaginative people everywhere. Courses in theatre history examine the origins of the art and explore the ways in which theatre has responded to and developed from its times. Courses in acting or in the crafts of theatre enhance the skills of students, whether they seek eventual performance careers or simply wish to be more knowledgeable audience members. The performance of great dramatic literature enables students to touch intimately some of the enduring ideas of civilization: love, death, hope, ambition, loyalty. People who succeed in the theatre have learned how to cooperate, how to work within deadlines and constraints, how to liberate and control expressiveness, and how to deal constructively with the tensions of performance.

The Department of Theatre sponsors an active co-curricular production program in a well-equipped theatre on campus. Plays of wide-ranging interest and appeal are produced each academic year. Recent productions include Othello, Dancing at Lughnasa, Hair, A Midsummer Night's Dream, Beirut, Man of LaManch, Double Bulldog, Tales of the Lost Formicans, Twelfth Night, and The Shape of Things, and Oedipus Rex.

## Minor in Theatre

## Requirements for a Minor in Theatre - Credits: 11

## Required Courses

- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1

2 credits required

## 3 Credits

From one of the following:

- THEA 281 - Survey of Dramatic Literature Credits: 3
or
- THEA 393 - History of Theatre Design and Architecture Credits: 3
or
- THEA 394 - Theories of Acting and Directing Credits: 3


## Electives Courses

- THEA 329
- THEA 330
- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 215 - Drawing/Drafting/CAD Credits: 3
- THEA 222 - Acting II Credits: 3
- THEA 235 - Costume Technology Credits: 3
- THEA 269 - Playwriting Credits: 3
- THEA 322-Acting Technique Credits: 3
- THEA 324 - Stage Makeup Credits: 3
- THEA 328 - Acting Shakespeare Credits: 3
- THEA 332 - Advanced Stagecraft Credits: 3
- THEA 333 - Scene Design Credits: 3
- THEA 334 - Stage Lighting Credits: 3
- THEA 335-Costume Design and History Credits: 3
- THEA 345 - Stage Management and Safety Credits: 3
- THEA 355 - Projects in Theatre Credits: 1 to 2
- THEA 393 - History of Theatre Design and Architecture Credits: 3
- THEA 394 - Theories of Acting and Directing Credits: 3
- THEA 450 - Internship Credits: 3 to 12
- THEA 490 - Independent Study Credits: 1 to 3
- THEA 498 - Selected Topics Credits: 1 to 3


## Theatre (BA)

## Requirements for the Theatre Bachelor of Arts - Credits: 40

## Required Core Courses for all Specializations - Credits: 21

- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1 (Four credits required)
- THEA 281 - Survey of Dramatic Literature Credits: 3
- THEA 337 - Directing Credits: 3
- THEA 425 - Professional Theatre Practice Credits: 3


## Select One of the Following:

## Specialization: Acting - Credits: 21

Required Courses - Credits: 18

- THEA 222 - Acting II Credits: 3
- THEA 322-Acting Technique Credits: 3
- THEA 324 - Stage Makeup Credits: 3
- THEA 328 - Acting Shakespeare Credits: 3
- THEA 330 - Voice and Movement for the Actor Credits: 3
- THEA 394 - Theories of Acting and Directing Credits: 3

Electives - Credits: 3

- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 215 - Drawing/Drafting/CAD Credits: 3
- THEA 235 - Costume Technology Credits: 3
- THEA 269 - Playwriting Credits: 3
- THEA 322 - Acting Technique Credits: 3
- THEA 329 - Shakespeare Tour Credits: 3
- THEA 332 - Advanced Stagecraft Credits: 3
- THEA 333 - Scene Design Credits: 3
- THEA 334 - Stage Lighting Credits: 3
- THEA 335 - Costume Design and History Credits: 3
- THEA 345-Stage Management and Safety Credits: 3
- THEA 355 - Projects in Theatre Credits: 1 to 2
- THEA 393 - History of Theatre Design and Architecture Credits: 3
- THEA 450 - Internship Credits: 3 to 12
- THEA 490 - Independent Study Credits: 1 to 3
- THEA 498 - Selected Topics Credits: 1 to 3


## Degree Completion in Four Years Theatre (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 29

- PESM Activity - Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
- G\&ES 202 - United States and Canada Credits: 3
- MUSI 101 - Introduction to Music Credits: 3
- PSYC 100 - Psychology Applied Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3
- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1

Sophomore Year - Total Hours: 32

- ART 105 - Basic Studio Drawing Credits: 3
- CHEM 104 - Introduction Chemistry I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PHYS 101 - Concepts of Science I Credits: 3
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1
- THEA 215 - Drawing/Drafting/CAD Credits: 3 or
- THEA 222 - Acting II Credits: 3
- THEA 281 - Survey of Dramatic Literature Credits: 3
- THEA 337 - Directing Credits: 3


## Junior Year - Total Hours: 31

- BIOL 101 - General Biology Credits: 3
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3
- SASW 105 - Human Diversity Credits: 3
- SASW 106 - Race and Ethnic Diversity in the U.S.A. Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1
- THEA 235 - Costume Technology Credits: 3
- THEA 324 - Stage Makeup Credits: 3
- THEA 328 - Acting Shakespeare Credits: 3 or THEA 151-Rehearsal and Production Credits: 1
- THEA 332 - Advanced Stagecraft Credits: 3
- THEA 333 - Scene Design Credits: 3
- THEA 334 - Stage Lighting Credits: 3
or
- THEA 335 - Costume Design and History Credits: 3

Senior Year - Total Credits: 28

- PHIL 323 -
- Internship - Credits: 6
- Electives - Credits: 12
- THEA 151 - Rehearsal and Production Credits: 1
- THEA 393 - History of Theatre Design and Architecture Credits: 3 or
- THEA 394 - Theories of Acting and Directing Credits: 3
- THEA 425 - Professional Theatre Practice Credits: 3


## Specialization: Design/Technology - Credits: 27

## Required Courses Credits: 15

- THEA 215 - Drawing/Drafting/CAD Credits: 3
- THEA 235 - Costume Technology Credits: 3
- THEA 333 - Scene Design Credits: 3
- THEA 334 - Stage Lighting Credits: 3
or
- THEA 335-Costume Design and History Credits: 3
- THEA 393 - History of Theatre Design and Architecture Credits: 3


## Electives

( 6 credits; 5 of the 6 must be 300 level or above)

- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 222 - Acting II Credits: 3
- THEA 269 - Playwriting Credits: 3
- THEA 322-Acting Technique Credits: 3
- THEA 328 - Acting Shakespeare Credits: 3
- THEA 329 - Shakespeare Tour Credits: 3
- THEA 330 - Voice and Movement for the Actor Credits: 3
- THEA 332 - Advanced Stagecraft Credits: 3
- THEA 334 - Stage Lighting Credits: 3
* see footnote
- THEA 335-Costume Design and History Credits: 3
* see footnote
- THEA 345 - Stage Management and Safety Credits: 3
- THEA 355 - Projects in Theatre Credits: 1 to 2
- THEA 394 - Theories of Acting and Directing Credits: 3
- THEA 450 - Internship Credits: 3 to 12
- THEA 490 - Independent Study Credits: 1 to 3
- THEA 498 - Selected Topics Credits: 1 to 3


## Footnote

*Courses may not be used to fulfill more than one requirement.

# Women's Studies 

007E Strain Behavioral Science Building
724-738-2992

## Director

Joan Condravy
The Women's Studies program is a multidisciplinary approach to teaching and learning. Its intent is to correct the focus of the academic establishment that has traditionally ignored, minimized, or excluded the work of women in most branches of knowledge and areas of experience. Its positive approach is a reassessment of learning and culture, and its goal is the assimilation of the best efforts of women into an integrated and equitable society. The program is not intended to replace one's major but rather to strengthen one's undergraduate preparation through a concentration of various aspects of Women's Studies. A concentration in Women's Studies prepares students for graduate study not only in that area but also any academic area that requires a fully balanced, gender-sensitive understanding of society and culture. Also, Women's Studies prepares students to interact in a professional world that reflects the marked changes occurring in traditional sex roles.

## Minor in Women's Studies

The Women's Studies program is a multidisciplinary approach to teaching and learning. Its intent is to correct the focus of the academic establishment that has traditionally ignored, minimized, or excluded the work of women in most branches of knowledge and areas of experience. Its positive approach is a reassessment of learning and culture, and its goal is the assimilation of the best efforts of women into an integrated and equitable society. The program is not intended to replace one's major but rather to strengthen one's undergraduate preparation through a concentration of various aspects of Women's Studies. A concentration in Women's Studies prepares students for graduate study not only in that area, but also any area that requires a fully balanced, gender-sensitive understanding of society and culture. Also, Women's Studies prepares students to interact in a professional world that reflects the marked changes occurring in traditional sex roles.

## Program Requirements - Credits: 15

Currently, student may earn a minor in Women's Studies by taking fifteen credits, which must include WMST 115 and six credits numbered at the 300 level or above from the following courses, and achieving a QPA of 2.000 or better.

In addition, students may earn a Document of Academic Achievement in Women's Studies by earning twelve credits from the following courses with a minimum QPA of 2.000.

- ENGL 210 - Interpreting Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 490 - Independent Study Credits: 1 to 3
- FREN 335 - Women in French Literature Credits: 3
- GERO 425 - Women and Aging Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HONR 386 - The Great Books Credits: 3
- HONR 387 - The Great Books Credits: 3
- HSAF 211 - Women and Health Care Credits: 3
- MUSI 301 - Women and Music Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- POLS 375 - Women and Politics Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- SASW 339 - Sex Roles and Society Credits: 3
- SPAN 335 - Women in Hispanic Literature Credits: 3
- WMST 115 - Introduction to Women's Studies Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3
- WMST 450 - Internship Credits: 3 to 12


## Minor in Women's Studies

## Requirements for the Minor in Women's Studies - Credits: 18

Currently students may earn a minor in Women's Studies by taking eighteen credits.

## Which Must Include

WMST 115 - Introduction to Women's Studies and six credits numbered at the 300 level or above, and achieving a QPA of 2.000 or better.

And any department 450 - Internship and any department 490 - Independent Study.

- ENGL 210 - Interpreting Literature Credits: 3 (designated sections)
- ENGL 243 - Literature of the Women's Movement Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HONR 386 - The Great Books Credits: 3
- HONR 387 - The Great Books Credits: 3
- HSAF 211 - Women and Health Care Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- POLS 375 - Women and Politics Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- SASW 339 - Sex Roles and Society Credits: 3
- WMST 115 - Introduction to Women's Studies Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3
- WMST 450 - Internship Credits: 3 to 12


## In Addition

Students may earn a Document of Academic Achievement in Women's Studies by earning twelve credits selected from the list above with a minimum QPA of 2.000.

## Enrollment Services

116 North Hall Welcome Center<br>724-738-4868

## Associate Provost

Amanda Yale

## Administrative Assistant

Carolyn Colosimo

## Departments

Academic Services

## Programs

First Year Studies
Retention Services
Services for Students with Disabilities

## Rock Solid Support

First Year Studies exists to support the teaching and learning process. The FYRST Program is designed to ease the transition into college life by providing a coordinated effort of offering academically based support services to students. The area has primarily one goal-to facilitate the student transition from high school or work to the university. Structurally, FYRST is the home of all new freshmen, organized within the Division of Enrollment Services. FYRST is comprised of The Department of Academic Services, Office of Retention, and Office for Students with Disabilities.

The majority of the university's academic support services are coordinated and delivered to new students by FYRST. Specifically, FYRST includes spring and summer orientation programming initiatives, first and second year academic advising, advising for exploratory students, learning community clusters, freshman seminar, tutoring, supplemental instruction, developmental math coursework, early-alert retention-based initiatives, services for students with disabilities, academic support services designed especially for first-year academically-challenged students, and support services for students who fall into academic difficulty during their college experience.

FYRST is about creating successful learning experiences for students in and outside the classroom. Progression through FYRST is to be assisted by the faculty advisor, however, it is the student's responsibility to see that he/she meets all requirements of the degree granting college so that upon completion of the first year of study, the student must attain the minimum number of credits, the specific courses and the minimum QPA required by the major department. Through setting high goals and commitment to meeting those goals, new freshmen are to be able to support their efforts through FYRST and make a successful transition.

## Office for Students with Disabilities

122 Bailey Library
724-738-4877

Assistant Director of Retention/Director, Disabled Student Services<br>Linda Smith

## Secretary

Kimberly Zedreck

The Office for Students with Disabilities provides accommodations and services to ensure equal access to education as intended by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 for students with disabilities including but not limited to learning, physical, hearing, vision or psychological disabilities. At Slippery Rock University we want all students to achieve academic success, and are interested in making every effort to accommodate and serve students with disabilities. To be eligible for services appropriate documentation must be provided. Documentation may include medical diagnosis, psychological evaluations, etc. Upon acceptance to Slippery Rock, students with disabilities are encouraged to make an appointment with the Director so a personal interview can be scheduled.

## Office of Retention Services

116 North Hall Welcome Center
724-738-2011

## Director

Carla Hradisky-Coffelt

## Secretary

Angela Koch
Service to our students is paramount at Slippery Rock University. We are not only interested in recruiting students to The Rock, but are equally as interested in seeing them through to success. Through the Office of Retention Services, Slippery Rock begins early in the first semester freshman year to retain its students by addressing the issues that a first semester freshman will experience. Assistance is offered to freshman students through a computerized assessment program call SAPA (Student Attendance, Performance and Adjustment Report).

Within the first 5 weeks of the semester, faculty who teach first year students are asked, "How are your freshman students doing?" These questions are asked to get a better sense if the students are attending class regularly, if they are prepared, doing homework assignments and are meeting success. Once the freshmen are evaluated, academic advisors along with key university personnel are notified of the problems.

During one-on-one interviews with SAPA cited student, university personnel have the opportunity to speak with students directly, refer them to academic tutoring, support sessions and recommend both personal and career counseling as needed.

FYRST students who have interrupted their attendance at The Rock for any reason may resume studies at Slippery Rock University by reapplying for admission through the Retention Services office.

## Academic Services

009 and 106 Bailey Library
724-738-2012

## Chair

Mark Campbell

## Secretaries

Laura Holste, Mary Beth Keffalas, Marsha McKnight and Kimberly Zedreck

## Faculty

Cathy Brinjak, Mark Campbell, Connie Laughner, Deborah Mariacher, Jessamine Montero, Susan Parsons, Armand Policchio, Annette Salsovic, Darla Shields, Christophas Walker


#### Abstract

ACT 101

Funded by the Pennsylvania Department of Education, the ACT 101 Program at SRU provides academic support services to 250 students meeting eligibility guidelines of residency and income. This program is designed to give students an opportunity to acquire and enhance skills necessary for academic success in higher education. Serving firstyear, transfer, and upper-level students, the ACT 101 Program provides orientation to the university, academic advisement in exploratory and supplemental advisement across majors, registration preparation sessions, peer assistance, tutorial services, majors exploration, linkage with university programs and services, and program advocacy. With a focus on student achievement, the program and university coordinate the ACT 101 financial award of $\$ 500$ for tuition to program students demonstrating academic success and persistence in their first two semesters. Program students may also qualify for priority registration and are able to access selected textbooks through the Act 101 Textbook Loan Services. If you are interested in ACT 101 Program services and/or guidelines, please contact the program at 724-738-2012 or act101@sru.edu.


## First Year Studies

## First Year Studies begins with a Rock Solid Orientation

FYRST begins with an orientation program during which students are introduced to the campus, to a FYRST faculty advisor, and to many institutional resources and services. New student orientation is designed to help students achieve a successful transition to university life. Slippery Rock employs new and innovative ways to greet new students in their first few days on campus
and assist them continually throughout their first year. New students who are admitted early have the opportunity to attend an early orientation program in the spring of their senior year. These students receive a head start on their college experience by scheduling for classes, receiving financial aid information, making and securing living arrangements, and meeting new friends, faculty, and college staff. The orientation program, which is conducted in June, is comprised of an overnight experience and more time to explore the campus and its resources. In August, new students are invited back to campus prior to the beginning of the fall semester for a welcome orientation session.

## Academic Advisement

Academic Advisement is perhaps the most important faculty/student relationship outside the classroom. The University's academic advisement system is comprised of two primary organizational structures that include First Year Studies advisement and upper-class student/transfer student advisement.

## First Year Studies (FYRST) Advisement


#### Abstract

All academic advisement of new freshmen is coordinated and directed by FYRST. The mission of FYRST advising is to personalize the first year by ensuring that every student receives a high standard of academic advisement services from pre-enrollment to orientation, and throughout the student's first year. FYRST advising provides assistance that will help students to acquire the knowledge and skills necessary to select an academic program or major which best suits their individual abilities, interests and career goals. During the student's enrollment in FYRST, he/she should develop a more thorough understanding of his/her own purpose and goals in college as well as those of the university. If a new freshman has declared a major, advisement will be provided by a faculty member selected from the major department. If no major has been declared, the student will be actively involved in the Exploratory Program and advised by a selected faculty member who has volunteered to work with students who have not decided upon a major. Progression through FYRST will be assisted by the faculty advisor, however, it is the student's responsibility to see that he/she meets all requirements of the degree granting college so that upon completion of the first year of study, the


student has attained the minimum number of credits, the specified courses and the minimum quality point average required by the major department.

## Upper-class Student/Transfer Student Advisement

As a student progresses from FYRST to the degree-granting college, some departments may reassign their students to different academic advisors during the upper-division years, while other departments may permit the student to retain the FYRST advisor throughout his/her years of study at the university. Upon entrance into the university, new transfer students are assigned academic advisors from their major program.

## Exploratory (Undeclared) Program

Students entering the university who are exploring majors participate in the Exploratory Program. These students are advised by FYRST advisors who volunteer their time to advise students as part of the Exploratory Program. The faculty identified as FYRST Exploratory advisors have an interest in and a commitment to assisting new students in their transition to college life.

## Advisement Development

The Academic Advisement Center is responsible for developing advisor and student advising resources, conducting advisor training and first year student advising informational workshops, and maintaining its involvement in retentionrelated and first-year research activities.

## Learning Community Clusters

The university recently implemented a learning community cluster program which includes a freshman seminar for the purpose of improving students' academic and social integration and establishing an educational environment that maximizes both student-student interaction, student-faculty and student-professional staff interaction. The transition to university life can be challenging and even stressful. The academic and social advantages provided by joining a learning community cluster and freshman seminar initiative can help reduce that stress. By enrolling in the same classes, students are encouraged to meet new people, make friends easily, form study groups, participate in class discussions, and become engaged with their professors.

Research has shown that the more students connect to the university, the more successful they are in their college experience. Our research shows that by enhancing a student's sense of community and involvement, the freshman seminar and learning community clusters contribute to higher retention rates. Because both freshman seminars and learning communities promote active learning and foster collaboration and cooperation, students who participate are higher achievers and more involved in their classes.

## Freshman Seminar (FYRST Seminar)

The freshman seminar course is designed especially to enhance the academic, social, and personal integration of the student by focusing on transition topics related to the college environment (e.g., time management, active learning strategies, note-taking skills, test preparation, goal setting, use of campus technology, academic advising, major and career exploration, professional development in the technology fields, diversity, relationship issues, and issues of wellness).

## Academic and Learning Assistance Resources

Housed in the Academic Services Center are a series of academic and learning assistance resources for students. This resource center offers free materials on first-year and adult academic transition tools; learning assistance resources on time management, effective reading, test preparation, test taking and note taking; and academic advising resources on scheduling tips, quality point average calculations, and information on major and career selection.

## Tutorial Center

Slippery Rock University's Tutorial Center assists undergraduate students in meeting their academic goals with peer individual and group tutoring services, study skills workshops, and Supplemental Instruction (SI). Emphasis upon basic skills and upon the Liberal Studies areas, study skills instruction and support, communication with faculty, and extensive training and supervision of tutors meets students' immediate academic and content based needs and provides them with effective and transferable study skills. Tutorial services at Slippery Rock University are personalized and tailored to individuals' academic needs.

Tutoring services also include the proactive Supplemental Instruction (SI) model for academic assistance. Students hired as leaders attend assigned classes and work closely with enrolled students to model and teach study skills strategies. Leaders facilitate group-tutoring sessions emphasizing cooperative learning activities.

Individual tutoring sessions for students are scheduled by appointment or on a drop-in basis, whereas group and SI sessions are scheduled to accommodate the greatest number of interested students.

## College Skills Workshops

During the fall, the Tutorial Center offers an array of workshops designed to help students succeed in college. All students are eligible to participate in the workshops on such topics as managing time, taking effective class notes, reading texts, building a strong memory, increasing test-taking skills.

## Student Support Services Program

The federally funded Student Support Services Program serves students who have experienced academic challenges at Slippery Rock. Students who are on academic probation or who are on an academic readmission contract participate in the program to develop successful college skills. Students participate in individual and group academic advisement activities and learning strategies course work which teaches them how to apply and develop effective learning and study habits. Students participating in the program enroll in a learning strategies course, which is focused on developing their learning strategies, academic goals, and decision-making skills.

## Lifelong Learning

165 Elm Street
724-738-1601

## Dean

James Kushner

## Secretary

Frances Harding

## Departments

Alumni Relations
Center for Lifelong and Community Learning

Continuing Education
Executive Leadership Program
McKeever Environmental Learning Center

## Programs

Institute for Learning in Retirement
Regional Learning Alliance
In keeping with its commitment to public education, SRU provides high quality programming in continuing education, off-campus programs, and distance learning options. Credit courses, non-credit courses, workshops, seminars, and webbased courses are scheduled at times and in locations that are particularly convenient for the part-time, non-traditional student. This permits the student to complete most of the required coursework in a variety of degrees and professional certificates while holding a full-time job. Classes are regularly scheduled at the Regional Learning Alliance site and at other sites in western Pennsylvania. Web based courses can be started at anytime and completed at the pace of the student.

In addition, non-credit courses, leisure education, customized courses and programs for business and industry, business consulting services, short-term workshops, Institute for Learning in Retirement, Pittsburgh Disabilities Employment Project for Freedom, and the Regional Learning Alliance are all integral parts of the Lifelong Learning function.

The offices of Alumni Relations, Center for Lifelong \& Community Development, Continuing Education, Executive Leadership Program, McKeever Environmental Learning Center, Regional Learning Alliance and Office of Corporate Partnerships have resources to develop specialized programs to meet the professional and personal enrichment needs of virtually any group, organization, business, or population. Further information is available through the Dean, or any of the offices.

## Alumni Relations

Russell Wright Alumni House

724-738-2018

## Director

Michael Saraka

## Secretaries

Deborah Kedanis
Dorothy Thompson
Slippery Rock University has more than 45,000 living graduates. They are employed in a multitude of professions and live throughout the world. Alumni are encouraged to join the Slippery Rock University Alumni Association, a separately incorporated organization that is devoted to serving the university and its alumni. One-year complementary memberships are provided to graduating seniors.

The scope of the association is dependent on the continued alumni affiliation with the university through association membership. Among the services that are provided by the Slippery Rock University Alumni Association are insurance programs, regional chapters, and the publication of the quarterly newsletter The Rock Insider. Significantly, the Alumni Association maintains seven scholarships. Six of the scholarships, the Madeline F. Stoops Scholarship, the Hallie Dugan Smith Scholarship, Eisaman Alumni Scholarship for Sophomore Students, the Maree McKay/Esther Smiley Scholarships, the Carl and Norma Laughner Scholarship, the Maggie Meise Scholarship, and the Watson Family Scholarship, are for academic excellence. The N. Kerr Thompson Scholarships are for athletics (see Scholarships).

The association also sponsors Homecoming and Alumni Reunion Weekend as well as special projects and events throughout the year. Additional information on the Alumni Association as well as upcoming events can be found on the alumni web site at www.sru.edu (click on "Alumni and Friends").

## Center for Lifelong and Community Learning

Downtown Slippery Rock

724-738-1601

The center serves the continuing education needs of area businesses and individuals in the town of Slippery Rock and the surrounding area. Slippery Rock University's Institute for Learning in Retirement (ILR) is located in the Center for Lifelong and Community Learning.

## Continuing Education

165 Elm Street

724-738-1601
Dean
James Kushner

## Secretary

Frances Harding
Continuing Education exists to serve and support the personal enrichment, professional development, and training needs of the people and businesses of Western Pennsylvania. Programs, workshops, and seminars are developed for all ages-children, adults, retirees, and senior citizens. Offerings are available at a Slippery Rock University site or at a client's site of choice.

An integral part of Continuing Education is the Center for Lifelong and Community Learning. This center serves as a training and personal enrichment site for community and professional development programs and workshops. The offerings here come through either Continuing Education or the Institute for Learning in Retirement (ILR). Being separate from, but near the main campus, affords the users of the facility ample free and convenient parking and the amenities of a smaller and more intimate facility dedicated solely to their needs. The facility includes a branch office for Continuing Education, the office for the Institute for Learning in Retirement (ILR), two classrooms, and a computer laboratory. Videoconferencing is available at the Center

## Executive Leadership Program

## 165 Elm Street

724-738-1601
Dean
James Kushner

## Secretary

Frances Harding
The most unique Executive Leadership Training Opportunity in the State. The 25 -acre Leadership Reaction Course at Slippery Rock University provides a perfect setting for leadership training. It is ideal for corporate camps and conferences, police, fire and EMS programs, student workshops, athletic teams and management seminars. Everything a group needs for enrichment is on site: obstacle and rope courses, a climbing wall, rappel tower, pavilions, camping
areas, and inter-connecting trails. Groups lease the course and lodging is available. Packages range from a two-hour activity, to a weeklong adventure retreat. Slippery Rock University provides trainers and educators for all events.

# McKeever Environmental Learning Center 

Sandy Lake, PA<br>724-376-1000

Director
Francis Bires

## Secretary

Karla Markl

The McKeever Environmental Learning Center is a public service institute for the State System of Higher Education administered by Slippery Rock University of Pennsylvania. It is the only facility within the system dedicated to the specific mission of providing environmental education to the citizens of the commonwealth. The center has been in operation since 1974, providing exemplary programming for students of all ages in the form of resident or day field trips, teacher workshops, educational seminars and special events for the public. Students from both private and public systems of higher education also complete eight weeks of their student teaching assignments at McKeever to enhance their teaching skills as future educators.

A Retreat Center consisting of 2 houses accommodating 20 people is available for staff/faculty get-aways, long range planning sessions and retreats. Visit the center's web site at www.mckeever.org.

## Regional Learning Alliance

Cranberry Woods,<br>Cranberry, PA<br>724-741-1018

## Executive Director of Corporate Partnerships

Patrick Gerity

## Secretary

Tracie Nehilla

The Regional Learning Alliance (RLA) was established to meet the needs of the community of lifelong learners in the Pittsburgh area. At the RLA in Cranberry Woods, graduate and undergraduate credit classes are offered in the evenings, Saturdays, and during the day to accommodate working adults who have other responsibilities. Noncredit classes are also available in computer software applications, nonprofit management skills, long term care administration, and a variety of other subjects.

The Regional Learning Alliancehouses the Slippery Rock University Office of Corporate Partnerships that provides continuing professional development and training programs throughout the western Pennsylvania area. This office develops productive relationships with business, industry, community and government in order to best serve the region's workforce and economic development needs. The Office of Corporate Partnerships specializes in developing creative solutions to business's training, performance, and productivity challenges. This office also has expertise in writing Customized Job Training Grants and Guaranteed Free Training contracts for those businesses that are qualified. Contact the RLA for additional information.

## Regional Learning Alliance

850 Cranberry Woods Drive
Cranberry Township, PA
724-741-1018

The primary purpose of the educational alliance is to efficiently and effectively meet the training and educational needs of the businesses and industries within a two-hour radius of Northern Allegheny County. Slippery Rock University will serve as the facility manager and broker educational services to match business, industry and community needs with the best available educational provider.

By collaborating rather than competing, educational providers make better utilization of their talents and resources. By consolidating rather than fragmenting, business and industry can save time and resources in finding the best answer to their workforce needs. By offering a comprehensive set of services under one roof, both providers and clients have available a range of services and options otherwise impossible from any single provider. Slippery Rock University positions the Regional Learning Alliance to be the resource magnet to serve regional workforce development demands within one of the fastest growing markets in Pennsylvania.

The facility is an "educational mall;" a highly adaptive multifunctional full service training facility providing auxiliary services such as career center, conference center, child-care, manufacturing development center, and other needed support services. The center operates on an extended schedule - days, evenings, and weekends. Most importantly, the educational alliance operates on a principle of customer service that promotes rapid response to community and business needs including rapid transformation of training areas.

## The Institute for Learning in Retirement (ILR)

The Institute for Learning In Retirement (ILR) at Slippery Rock University is a member-directed organization, providing lively learning experiences for mature adults who share a love of learning. The ILR is an affiliate of the Elderhostel Institute Network. The nominal membership dues cover as many classes in the ILR program as one wishes to take as well as other member benefits. The office and instructional site for the ILR is located at the Center for Lifelong and Community Learning in downtown Slippery Rock. Free and convenient parking is readily available. For additional information please call 724-738-1604 or email: learning_retirement@sru.edu.

## Contact Information

## Whom to Contact at Slippery Rock About

Academic Records and Transcripts -
Office of Academic Records and Summer School
www.sru.edu/pages/260.asp

Academic Services (FIRST Year Studies (FYRST) Program)
www.sru.edu/pages/1205.asp

Academic Services
www.sru.edu/pages/1961.asp
724-738-2012

| ```Admissions (Freshman Undergraduate) - Office of Admissions www.sru.edu/pages/5259.asp``` | 724-738-2015 or 1-800-929-4778 |
| :---: | :---: |
| ```Admissions (International Undergraduate) - Office of International Initiatives www.sru.edu/pages/7588.asp``` | 724-738-2057 |
| Admissions (Transfer undergraduate) Office of Admissions www.sru.edu/pages/498.asp | 724-738-2015 or 1-800-929-4778 |
| ```Admissions (Readmission Undergraduate) - Office of Admissions www.sru.edu/pages/5259.asp``` | 724-738-2015 or 1-800-929-4778 |
| Admissions (Graduate) - Office of Graduate Admissions www.sru.edu/pages/7724.asp | 724-738-2051 |
| Alumni - Office of Alumni Affairs www.sru.edu/pages/5155.asp | 724-738-2018 |
| Athletics - Office of Intercollegiate Athletics rockathletics.collegesports.com/ | 724-738-2021 |
| Campus Tours - Office of Admissions www.sru.edu/pages/1786.asp | 724-738-2015 or 1-800-929-4778 |
| Career Services - Office of Career Services http://www.sru.edu/pages/10850.asp | 724-738-2028 |
| College of Business, Information, and Social Sciences www.sru.edu/pages/2192.asp | 724-738-2008 |


| College of Education www.sru.edu/pages/688.asp | 724-738-2007 |
| :---: | :---: |
| College of Health, Environment and Science www.sru.edu/pages/2402.asp | 724-738-4862 |
| College of Humanities, Fine and Performing Arts www.sru.edu/pages/916.asp | 724-738-4863 |
| Lifelong Learning | 724-738-2633 |
| Counseling - Counseling Center www.sru.edu/pages/267.asp | 724-738-2034 |
| Diversity and Equal Opportunity www.sru.edu/pages/1721.asp | 724-738-2016 |
| Financial Aid - Office of Financial Aid www.sru.edu/pages/5013.asp | 724-738-2044 |
| Health Center - Health Services www.sru.edu/pages/266.asp | 724-738-2052 |
| Honors Program www.sru.edu/pages/1239.asp | 724-738-3722 |
| Information Technology www.sru.edu/pages/343.asp | 724-738-2800 |
| Intercultural Programs www.sru.edu/pages/6577.asp | 724-738-2700 |

International Student Information -
Office of International Initiatives

| Orientation - Office of Orientation <br> www.sru.edu/pages/5737.asp | $724-738-2067$ |
| :--- | ---: |
|  |  |
| Registration - Office of Academic Records /Summer School <br> www.sru.edu/pages/260.asp | $724-738-2010$ |

Residence Halls - Office of Residence Life
www.sru.edu/pages/5877.asp
Retention Services - Office of Retention Services 724-738-2011
www.sru.edu/pages/5769.asp
Scholarships - Office of Financial Aid
www.sru.edu/pages/4986.asp

| Student Activities/Organizations/Services/Student Life - |  |
| :--- | :--- |
| Office of Student Organizations and Leadership | 724-738-2092 |
| www.sru.edu/pages/10200.asp |  |

Student Employment - Office of Career Services
www.sru.edu/pages/10850.asp
724-738-2028

Study Abroad - Office of International Initiatives
www.sru.edu/pages/7588.asp
724-738-2057

Tuition and Fees/Billing/Payment - Office of Student Accounts
www.sru.edu/pages/265.asp
724-738-2088

All communications should be directed to the proper university office at:
Slippery Rock University of Pennsylvania, Slippery Rock, PA 16057

## Course Descriptions

## ACCT 101 - American Taxation

The course will provide a basic understanding of federal, state and local individual taxes and a history and background of government policy, philosophy and incentives enacted through the tax code. (Liberal Studies goal course-Our National Experience.)

Credits: 3

## ACCT 205 - Accounting for Decision Makers

Emphasizes practical use of accounting information to support decision making by those in fields such as business, sports, resort management, government, education, and not-for-profit. Overview of financial and managerial accounting from a user's perspective, including use and analysis of financial statements, internal control, budget preparation, and cost and revenues behavior patterns. (For non-business majors)

Credits: 3

## ACCT 209 - Fundamental Accounting I

A study of the elementary principles of accounting. The recording, classifying, summarizing, and interpretation of monetary transactions of the business firm are emphasized. The student is introduced to financial statement reporting and internal control.

Credits: 3

## ACCT 210 - Fundamental Accounting II

Principles of financial accounting with emphasis on partnership and corporation financial statements and management accounting including product costing, internal decision making, and planning and control.

## Prerequisites \& Notes

ACCT 209

Credits: 3

## ACCT 230 - Accounting Information Systems

An introduction to integrating accounting records with computers. Topics covered include: the role of AIS in the business environment, systems, accounting software, design, and accountants' use of spreadsheets, databases, and word processing.

## Prerequisites \& Notes

Pre- or Co-requisites: ACCT 210, CPSC 210 and microcomputer proficiency

Credits: 3

## ACCT 240 - Legal Environment or Business I

A study of the various processes available to resolve business disputes and an exploration of complex legal relationships that affect business, including contracts, business formations, employment, and torts and consumer law.

Credits: 3

## ACCT 308 - Federal Individual Income Tax

Study of the federal income tax system, individual returns, rates, income exclusions and inclusions, gains and losses, deductions, alternate tax methods, and withholding of taxes. Prerequisite: Advanced business standing.

Credits: 3

## ACCT 309- Cost Accounting I

Control concepts and costing methods, including systems for management control, manufacturing inventory valuation, standard variance analysis, and budgeting.

## Prerequisites \& Notes

ACCT 210, CPSC 210, MGMT/ECON 219, Advanced business standing

Credits: 3

## ACCT 310-Cost Accounting II

Long range budget preparation, capital investments, transfer pricing, decision models in cost accounting, and quantitative methods in cost analysis.

Prerequisites \& Notes
ACCT 309

Credits: 3

## ACCT 311 - Federal Corporate and Transfer Taxes

Corporate, partnership, estate and trust taxation are covered along with topics such as depletion, net operating losses, and installment and deferred payment sale.

## Prerequisites \& Notes

ACCT 308 or permission of the instructor
Credits: 3

## ACCT 313 - Intermediate Accounting I

The study of the foundations of accounting theory and practice with emphasis placed on the conceptual framework of accounting and the development of generally accepted accounting procedures including standards promulgated by CAP, APB, FASB, EITF, and other standards setting bodies; and the application of GAAP in accounting for assets and liabilities. Ethical issues and concerns are stressed throughout the course.

## Prerequisites \& Notes

Advanced business standing
Credits: 3

## ACCT 314 - Intermediate Accounting II

A continuation of ACCT 313 covering the detailed examination and application of generally accepted accounting procedures in accounting for stockholders' equity: contributed capital and retained earnings; revenue and expense determination, recognition, and measurement with particular emphasis on pensions, leases, and deferred taxes. Ethical issues and concerns are stressed throughout the course.

Prerequisites \& Notes
Advanced business standing
Credits: 3

## ACCT 341 - Legal Environment of Business II

An analysis of complex transactions including mergers and acquisitions, antitrust law, financial instruments, intellectual property, bankruptcy, environmental, estate and international law.

Prerequisites \& Notes
ACCT 240

Credits: 3

## ACCT 411 - Auditing Theory and Practice

Objective examination of financial statements with emphasis on internal control, review and evaluation, sampling theory and application, and procedural testing.

## Prerequisites \& Notes

Advanced business standing and ACCT 314 or permission of the instructor

Credits: 3

## ACCT 412-Accounting Seminar

Analysis of current accounting theory and application in practice. Additional focus on ethics, written and oral communication, organization skills, professionalism, and current topics.

## Prerequisites \& Notes

Advanced business standing and ACCT 314 or permission of the instructor

Credits: 3

## ACCT 413 - Advanced Accounting I

Advanced financial accounting theory and practice with emphasis on consolidations and partnerships.

## Prerequisites \& Notes

ACCT 313 and advanced business standing

Credits: 3

## ACCT 414 - Advanced Accounting II

Continuation of ACCT 413 with emphasis on governmental and not-for-profit accounting and multinational accounting.

## Prerequisites \& Notes

ACCT 413 or permission of the instructor
Credits: 3

## ACCT 419 - Auditing Systems

Continuation of ACCT 411 with emphasis on computerized accounting systems and auditing procedures.

Prerequisites \& Notes
ACCT 411 or permission of the instructor

Credits: 3

## ACCT 450 - Internship

Supervised placement in selected public and private agencies at appropriate institutions. Prerequisites: Application and permission of the instructor.

## Prerequisites \& Notes

Application and permission of the instructor

Credits: 3 to 12

## ACCT 490 - Independent Study

In-depth reading and/or research in an area of particular interest to the student, done with the guidance of a faculty member. Prerequisites: 12 credits of accounting courses, application, and permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

## Prerequisites \& Notes

12 credits of account 9 ing courses, application and permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted

Credits: 1 to 3

## ACSD 109 - Developmental Mathematics

This course covers basic arithmetic skills necessary for successful completion of basic algebra. Topics include basic operations using whole numbers, fractions and decimals, ratios and proportions, percents, and solving equations. Students not exempted from ACSD 109 must successfully complete this course before enrolling in ACSD 110. Students must pass a standard proficiency exam to pass this course. Course grading: A, B, C, or NC. Credit earned in this course will not count toward the university's 120 credit hour minimum required for graduation. )

Credits: 3

## ACSD 110 - Beginning Algebra

An overview of introductory algebra concepts, this course covers topics such as: simplifying variable expressions, solving equations and applications problems, simplifying polynomials, factoring, algebraic fractions, graphing linear equations, solving systems of linear equations, and simplifying radical expressions. Students who are placed into this course are expected to possess certain minimum competencies in arithmetic skills, and they must pass a standard proficiency exam to pass this course. Course grading: A, B, C, or NC. Prerequisite: ACSD 109 or exemption from ACSD 109. Credit earned in this course will not count toward the university's 120 credit hour minimum required for graduation.

Credits: 3

## ART 100-2-D Design

An introductory studio course examining the underlying structure of basic design in two-dimensional art. Students will be involved in the actual production of two-dimensional design solutions. The history of design is explored, as well as the various techniques employed by artists to express personal visions, communicate ideas or examine and interpret the human experience.

Credits: 3

## ART 101-3-D Design

An introductory studio course examining the underlying structure of basic design in three-dimensional art. Students will be involved in the actual production of three-dimensional design solutions. The history of design is explored, as well as the various techniques employed by artists to express personal visions, communicate ideas or examine and interpret the human experience.

## Credits: 3

## ART 105 - Basic Studio Drawing

This course provides the student with the option to work drawing. An introductory course in the studio techniques and the primary functions of this two dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 106 - Basic Studio Painting

This course provides the student with the option to work painting. An introductory course in the studio techniques and the primary functions of this two dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 107 - Basic Studio Photography

This course provides the student with the option to work photography. An introductory course in the studio techniques and the primary functions of this two dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 108 - Basic Studio Printmaking

This course provides the student with the option to work printmaking. An introductory course in the studio techniques and the primary functions of this two dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 109 - Basic Studio Metalsmithing

This course provides the student with the option to work metalsmithing. An introductory course in the studio techniques and the primary functions of this three dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 110 - Basic Studio Sculpture

This course provides the student with the option to work sculpture. An introductory course in the studio techniques and the primary functions of this three dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 111 - Basic Studio Fibers

This course provides the student with the option to work fibers. An introductory course in the studio techniques and the primary functions of this three dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 112 - Basic Studio Ceramics

This course provides the student with the option to work ceramics. An introductory course in the studio techniques and the primary functions of this three dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 114 - Basic Studio Digital Media

This course provides the student with the option to work digital media. An introductory course in the studio techniques and the primary functions of this two dimensional studio discipline. Through creative studio practice, students discover relationships relevant to their role as an artist. (This course may not be repeated.)

Credits: 3

## ART 115 - Visual Literacy

A cornerstone course involving the study of visual forms of communication with an emphasis on image-based media (newspaper, magazine, film, television, photography, informational graphics, interactive multimedia, digital games and web-based technologies). Topics include visual interpretation, visual manipulation, visual conventions, the role of visual media in cultural processes and aesthetic appreciation.

Credits: 3

## ART 200 - Activities and Fundamentals

A course providing for the study of child development through creative activities. It includes theory, experimentation with two and three-dimensional processes appropriate to the elementary classroom, methods of motivation, evaluation and classroom management.

Credits: 3

## ART 205-Art Synthesis Drawing

This course provides student options working in drawing. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 206-Art Synthesis Painting

This course provides student options working in painting. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 207 - Art Synthesis Photography

This course provides student options working in photography. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 208 - Art Synthesis Printmaking

This course provides student options working in printmaking. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 209-Art Synthesis Metalsmithing

This course provides student options working in metalsmithing. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 210 - Art Synthesis Sculpture

This course provides student options working in sculpture. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 211 - Art Synthesis Fibers

This course provides student options working in fibers. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 212-Art Synthesis Ceramics

This course provides student options working in ceramics. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 213-Art Synthesis Design

This course provides student options working in design. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 214 - Art Synthesis Digital Media

This course provides student options working in digital media. Emphasis is given to the synthesis of the student experience through art.

## Prerequisites \& Notes

One course at the basic studio level chosen from ART 100, 101, and 105 through 114. Limited to 6 credits in any one studio.

Credits: 3

## ART 225 - Overview of Western Art

A sweeping survey intended to acquaint the student with the stylistic development and chronology of the western tradition in the arts. Covers the period and styles prevalent in the Western World from the Beginnings of art to the modern era.

Credits: 3

## ART 226 - Overview of World Art

A survey course intended to acquaint the student with the stylistic developments and chronology of the visual arts in Asia, Africa, India and South America. Special emphasis will be given to the expression of cultural, religious and aesthetic purposes of art works created outside the western tradition.

Credits: 3

## ART 300-Art Seminar

A seminar for advanced art studio majors, designed to sharpen the students' critical and evaluation skills.
Prerequisites \& Notes
6 credits of advanced studio

Credits: 3

## ART 305 - Advanced Studio Drawing

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with drawing. Students are limited to 9 credits in any
one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 306 - Advanced Studio Painting

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with painting. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 307-Advanced Studio Photography

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with photography. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 308 - Advanced Studio Printmaking

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with printmaking. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 309 - Advanced Studio Metalsmithing

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with metalsmithing. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.
Credits: 3

## ART 310 - Advanced Studio Sculpture

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with sculpture. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.
Credits: 3

## ART 311 - Advanced Studio Fibers

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with fibers. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.
Credits: 3

## ART 312 - Advanced Studio Ceramics

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with ceramics. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 313 - Advanced Studio Design

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with desgn. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

6 credits chosen from ART 205 through 214.

Credits: 3

## ART 314 - Advanced Studio Digital Media

A continuation of art synthesis courses which provide an expanded range of approaches to the solution of advanced studio problems. This course provides student options in working with digital media. Students are limited to 9 credits in any one studio.

## Prerequisites \& Notes

Credits: 3

## ART 315-Master Studio

A course in which master artists and craftsmen speak to the history and development of their discipline. They will also demonstrate techniques and critique student work. May be repeated for a maximum of 9 credits.

Credits: 1

## ART 317 - Advanced Topics in Elementary Art

This course will provide elementary education majors with an understanding and an ability to use the elements of discipline-based art education in the classroom. Encompassing the four areas of Art Education (art criticism, art history, aesthetics and art production) the main emphasis of coursework will be to create a framework for rigorous and challenging study of art as it applies to the development of children in an elementary setting.

Credits: 3

## ART 325 - North American Art History

Explores the history of the visual arts produced on the North American continent and covers the artistic expressions of Native Americans and the development of European colonial art to the Second World War.

## Prerequisites \& Notes

ART 225

Credits: 3

## ART 335 - The Renaissance Tradition

Explores the historical development of the visual arts in Europe from the mid-14th century to the mid-17th century.

Prerequisites \& Notes
ART 225

Credits: 3

## ART 345 - Foundations of Modern Art

The development of modern concepts and approaches in the visual arts from the late 18th century up to and including Impressionism in the late 19th century.

## Prerequisites \& Notes

ART 225 or 325 or 335

Credits: 3

## ART 355 - Early Modern Art

Explores the history of the visual arts during the late nineteenth century culminating with the surrealist movement before the Second World War.

## Prerequisites \& Notes

ART 225 or 325 or 345

Credits: 3

## ART 365 - Art Since 1945

Explores the development of the visual arts in the late twentieth century. It will cover the social, cultural and stylistic movements from Abstract Expressionism to contemporary art.

## Prerequisites \& Notes

ART 225 or 325 or 335,345 or 355 or permission of the instructor

Credits: 3

## ART 405 - Senior Studio Drawing

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 406 - Senior Studio Painting

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 407 - Senior Studio Photography

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 408 - Senior Studio Printmaking

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 409 - Senior Studio Metalsmithing

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 410 - Senior Studio Sculpture

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 411 - Senior Studio Fibers

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 412 - Senior Studio Ceramics

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 413 - Senior Studio Design

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 414 - Senior Studio Digital Media

This course in studio work utilizes studio facilities in the accomplishment of the students' senior level artistic objectives. (3 credits may be repeated with the instructor's permission for a maximum of 9 credits).

## Prerequisites \& Notes

6 credits of advanced studio

Credits: 3

## ART 420 - Art History Seminar

A seminar for students qualified to do independent study and research in art history. Topics selected through consultation with the instructor.

Prerequisites \& Notes
ART 325, 335, 345, 355, 365

Credits: 3

## ART 425 - Senior Project Drawing

This course provides independent study in drawing, culminating in a public exhibition demonstrating the students' artistic stance.

Prerequisites \& Notes
Permission of the instructor

Credits: 3

## ART 426 - Senior Project Painting

This course provides independent study in painting, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 427 - Senior Project Photography

This course provides independent study in photography, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 428 - Senior Project Printmaking

This course provides independent study in printmaking, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 429 - Senior Project Metalsmithing

This course provides independent study in metalsmithing, culminating in a public exhibition demonstrating the students' artistic stance.

Prerequisites \& Notes
Permission of the instructor

Credits: 3

## ART 430 - Senior Project Sculpture

This course provides independent study in sculpture, culminating in a public exhibition demonstrating the students' artistic stance.

Prerequisites \& Notes
Permission of the instructor

Credits: 3

## ART 431 - Senior Project Fibers

This course provides independent study in fibers, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 432 - Senior Project Ceramics

This course provides independent study in ceramics, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 433 - Senior Project Design

This course provides independent study in design, culminating in a public exhibition demonstrating the students' artistic stance.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## ART 434 - Senior Project Digital Media

This course provides independent study in digital media, culminating in a public exhibition demonstrating the students' artistic stance.

Prerequisites \& Notes
Permission of the instructor

Credits: 3

## ART 450 - Internship

Professional experiences geared to student vocational goals. Working in galleries, museums or graphic design studios, working with professional artists in their studios and other job-related experiences.

Prerequisites \& Notes
Completion of 24 credits in studio art

Credits: 12, 6, 3

## ART 475-Extended Studio Drawing

Advanced work drawing studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

## ART 476-Extended Studio Painting

Advanced work in painting studio.

Credits: 1

## ART 477 - Extended Studio Photography

Advanced work photography studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

## ART 478 - Extended Studio Printmaking

Advanced work printmaking studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

## ART 479 - Extended Studio Metalsmithing

Advanced work metalsmithing studio.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1

## ART 480 - Extended Studio Sculpture

Advanced work sculpture studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

## ART 481 - Extended Studio Fibers

Advanced work fiber studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

ART 482 - Extended Studio Ceramics

Advanced work ceramics studio.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1

## ART 484 - Extended Studio Digital Media

Advanced work digital media studio.

Prerequisites \& Notes
Permission of the instructor

Credits: 1

## ART 490 - Independent Study

Offers the opportunities of advanced creative activity in a single area of concentration (painting, graphics, ceramics, art history, etc.) to be chosen by the student with the consent of the department. Prerequisites: Junior or senior standing, completion of lower level course offerings in chosen area of concentration, acceptance of project proposal by the department and permission of the instructor, departmental chairperson and dean of the college where the study will be conducted.

Credits: 1 to 3

## BIOL 100 - Introductory Biology Laboratory

This laboratory activity course is designed to introduce the non-biology major to science as a process. Basic biological concepts and principles are the focal points for the laboratory activities. The scientific process is used throughout the hands on exercises to facilitate the learning experience.

Credits: 1

## BIOL 101 - General Biology

A principles course in biology, designed for non-biology majors, which emphasizes cellular structure and function, Mendelian and molecular genetics, reproduction, and classic and modern concepts of ecology and evolution.

Credits: 3

## BIOL 102 - Human Biology

This non-biology majors course considers the human as a whole organism, with emphasis on the interrelationships of organ systems, the relationship to the environment, and human origins and genetics.

Credits: 3

## BIOL 104 - Principles of Biology

A laboratory and lecture course that emphasizes basic biological principles to prepare students for subsequent sequential courses required of biology majors.

Credits: 4

## BIOL 105 - Environmental Biology

A non-biology majors course which provides an introduction to ecological principles and concepts with an examination of the biological basis of contemporary environmental problems.

Credits: 3

## BIOL 120 - Practical Botany

Basic structures, functions, and uses of plants. This course, for the non-biology major, will stress many of the economic and practical aspects of plants. It will also offer historical insights concerning the impact plants have had on world exploration, colonization, etc.

Credits: 3

## BIOL 201 - General Botany

Basic biochemical, morphological, and physiological aspects of plant biology as they relate to evolution. Includes a lab.

Prerequisites \& Notes
BIOL 101 or 102 or 104

Credits: 4

BIOL 207 - Land Plants and Their Environment

This course for non-biology majors surveys the common plants native to Pennsylvania. Includes a lab.

Credits: 3

## BIOL 208 - Introduction to Wildlife Management

For non-biology majors, this course covers basic ecological principles with emphasis on the taxonomy and life histories of vertebrate animals. Includes a lab.

Credits: 3

## BIOL 210 - Medical Microbiology

The study of pathogenic microorganisms to include taxonomy, structure, biological activities, host defense mechanisms, disease transmission, and disease states. Includes a lab.

Prerequisites \& Notes
BIOL 101 or 102 or 216

Credits: 3

## BIOL 212-General Zoology

The anatomy, physiology, ecology, and economic importance of representative animals with emphasis on the understanding of development and the evolutionary blueprint of the animal kingdom. Includes a lab.

Prerequisites \& Notes
BIOL 101 or 102 or 104

Credits: 4

## BIOL 213 - Medical Immunology

A lecture and laboratory course for medical technology majors which emphasizes immunological principals of medical importance.

Prerequisites \& Notes
BIOL 210

Credits: 1

## BIOL 214 - Medical Parasitology

A lecture and laboratory course for medical technology majors which emphasizes the protozoans and metazoa of medical importance.

Prerequisites \& Notes
BIOL 210

Credits: 1

## BIOL 215-Medical Mycology

A lecture and laboratory course for medical technology majors which emphasizes the fungi of medical importance.

## Prerequisites \& Notes

BIOL 210

Credits: 1

## BIOL 216 - Anatomy and Physiology

The first of two lecture and laboratory courses for non-biology majors which surveys the normal structure and function of the human body. It is recommended that 216 be taken prior to 217 . This course includes a lab.

Credits: 3

## BIOL 217 - Anatomy and Physiology

The second of two lecture and laboratory courses for non-biology majors which surveys the normal structure and function of the human body. It is recommended that 216 be taken prior to 217 . This course includes a lab.

Credits: 3

## BIOL 250 - Genetics

An introductory course that covers transmission genetics, molecular genetics, and population genetics, with an emphasis on problem-solving. Examples in both plants and animals (including humans) are considered. Includes a lab.

## Prerequisites \& Notes

BIOL 101 or 102 or 104

Credits: 4

## BIOL 300 - Social and Ethical Issues in Genetics

Advances in genetics have the potential to do much good, but they may also create difficult social and ethical issues that we are unprepared for. This course seeks to provide students of all majors with the necessary framework for arriving at their own conclusions about the proper role of genetic technology, for themselves, their families, and society at large.

## Prerequisites \& Notes

Advanced standing and BIOL 101 or 102 or 104
Credits: 3

## BIOL 305 - Aquatic Plants

This course deals with the identification and quantification of phytoplankton and vascular hydrophytes, with emphasis placed on the productivity of aquatic plants and their importance as indicator organisms. Includes a lab.

Credits: 3

## BIOL 306 - Freshwater Biomonitoring

This course covers the identification and quantification of fish, zooplankton, and benthos organisms, with emphasis placed on the productivity of aquatic animals and their importance as indicator organisms. Includes a lab.

## Prerequisites \& Notes

BIOL 101 or 104 and CHEM 108

Credits: 3

## BIOL 310 - Plant Systematics

Evolutionary trends in floristic morphology are used to examine family relationships among the major groups of vascular plants. Includes a lab.

## Prerequisites \& Notes

BIOL 201
Credits: 3

## BIOL 311 - Entomology

Insects, including their taxonomy, structure, function, ecology, and economic importance.
Prerequisites \& Notes
BIOL 212

Credits: 3

## BIOL 320 - Ornithology

Anatomy, physiology, taxonomy, ecology, and behavior of birds. Two weekend field trips are required. Includes a lab.

## Prerequisites \& Notes

BIOL 212

Credits: 3

## BIOL 325 - Biometry

An introduction to statistical techniques and experimental design as applied to biological problems. Descriptive methods, tests of significance, linear regression, correlation, analysis of variance and covariance, and non-parametric techniques are included. Use of PC and/or mainframe computer is required. Includes a lab.

Credits: 3

## BIOL 330 - Microbiology

A consideration of the structure, metabolism, growth, and genetics of microorganisms with emphasis placed on the bacteria and viruses. Includes a lab.

Prerequisites \& Notes
BIOL 250 and CHEM 200 or 201

Credits: 3

## BIOL 335 - Cell Biology

Lecture and laboratory investigations related to cellular structure and function. Topics include consideration of extracellular matrix, cell surface, internalization, intracellular signaling and routing, cell-cell communication, renewal, and development.

## Prerequisites \& Notes

BIOL 250 and CHEM 200 or 201

Credits: 3

## BIOL 340 - Vertebrate Anatomy

A comparative study of the adult structure of the organs and systems of representative vertebrates. Laboratory included.

## Prerequisites \& Notes

BIOL 212

Credits: 3

## BIOL 343 - Embryology

Developmental processes of vertebrate embryology. A comparative study of gaetogenesis, fertilization, cleavage, gastrulation, organogenesis, and embronic adaptations. Includes a lab.

## Prerequisites \& Notes

BIOL 340 or permission of the instructor

Credits: 3

## BIOL 345 - Introduction to Biological Electron Microscopy

An introduction to the theoretical basis and practice of routine biological electron microscopy. Experiences in the preparation of specimens for transmission and scanning electron microscopy will be presented. The course presentation will involve a one-week workshop and two hours per week during the semester.

## Prerequisites \& Notes

The successful completion (or the equivalent) of two years of basic science courses at the university level
Credits: 2

## BIOL 350 - Evolution

Stresses evolution as a process. Evidence of early theories, population genetics and ecology, modern synthetic theory, speciation, phylogeny, and the major features characteristic of organic evolution are included.

Prerequisites \& Notes
BIOL 201, 212, 250
Credits: 3

## BIOL 357 - Environmental Microbiology

The interactions of microorganisms with their environment and with other organisms in nutrient cycles and environmental bioremediation, and the effects of microbial activity on plants and animals. Includes a lab.

## Prerequisites \& Notes

BIOL 101 or 104 or equivalent, CHEM 200 or 202

Credits: 4

## BIOL 360 - Field Botany

A field course covering the flora of western Pennsylvania. Students will be expected to identify in the field approximately 225 vascular plants.

Credits: 3

## BIOL 370 - Molecular Biology

A lecture and laboratory study of the structure and function of biological macromolecules and of the functions of living cells at the molecular level. Topics include macromolecular structures, gene expression and regulation, and manipulations of genetic material. Includes a lab.

Prerequisites \& Notes
BIOL 250 and CHEM 201 or CHEM 202

Credits: 3

## BIOL 371 - Vertebrate Field Zoology

Taxonomy, life histories, and ecological relationships of representative vertebrates are stressed. Several field trips are required.

Credits: 3

## BIOL 401 - Ecology

Emphasis is placed on the structure, composition, and dynamics of ecosystems. Lab work primarily consists of field studies.

## Prerequisites \& Notes

BIOL 101 or 104, and CHEM 108 and junior standing

Credits: 3

## BIOL 405 - Animal Physiological Ecology

The adaptations of animals to deal with specialized environmental situations are studied at levels ranging from biochemical to organismal.

Prerequisites \& Notes
BIOL 104, 212, CHEM 107, 108

Credits: 4

## BIOL 410 - Animal Physiology

Basic animal physiological processes, including a synthesis that begins at the molecular level and moves to the more complex cellular and organismal levels. Includes a lab.

Prerequisites \& Notes
Co-requisite: CHEM 201

Credits: 3

## BIOL 430 - Pathogenic Microbiology

This course examines the role of bacteria in disease processes with emphasis on host-pathogen interactions and mechanisms by which pathogenic bacteria cause disease. General topics to be discussed include pathogenesis, epidemiology, and characteristics of the major pathogenic bacteria, which allow them to produce a disease state in the host. Includes a lab.

Prerequisites \& Notes
BIOL 330

Credits: 3

## BIOL 450 - Biology Internship

This course will permit the biology major to obtain credit for on-the-job experience in such areas as hospitals, greenhouses, nurseries, sewage plants, fish, and game commissions, park service, plant breeders, and seed producers, veterinary medicine, etc. (repeatable up to 15 credits)

Credits: 1 to 3

## BIOL 451 - Plant Physiology

A lecture-laboratory study of the functional relationships of the plant body including such topics as nutrition, water relations, photosynthesis, photo-periodism, hormones, and growth processes.

## Prerequisites \& Notes

BIOL 201 and CHEM 201

Credits: 3

## BIOL 465 - Plant Anatomy

A macroscoic and microscopic laboratory study of vascular plants. Tissue and organ structure and development in a wide variety of plant groups are emphasized. Includes a lab.

## Prerequisites \& Notes

BIOL 201

Credits: 3

## BIOL 470 - Histology

Microscopic structure and arrangement of tissues in multicellular organisms. Prepared microscopic slides of representative animal organs are studied. Includes a lab.

## Prerequisites \& Notes

BIOL 212 or permission of the instructor

Credits: 3

## BIOL 490 - Independent Study

Independent research under the guidance of a faculty member. Prerequisite: Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted. (repeatable up to 6 credits)

Credits: 1 to 3

## BIOL 492 - Biology Seminar

For junior and senior biology majors. Each semester a different area of current research interest is chosen for study.
Credits: 1

## BIOL 498 - Selected Topics

The in depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## CDEV 201 - Interpersonal and Group Dynamics

Interpersonal behavior in small groups, with attention to group structure, individual factors, communication, and techniques. Treatment of leadership, group pressures, the effect of the group on personality, and group aims.

Credits: 3

## CDEV 248 - Human Development and Education

A study of the various stages of physical, intellectual, and emotional development, from pre-school age through adolescence, with reference to the effects upon the learning and educational process.

Credits: 3

## CDEV 249 - Child Development

A study of the various stages of development from conception to adolescence. Attention is directed to the physical, emotional, intellectual and social development of the child.

Credits: 3

## CDEV 250 - Adolescent Psychology

A study of the physical, mental and emotional development during the changes from childhood and the influence on attitudes and behavior of the age group in relation to the theories. Psychological principles are applied to the problems of family, community and school adjustment, as well as to the development of the persons.

Credits: 3

## CDEV 342 - Educational Psychology

Application of psychological learning theories to the educational process.

Credits: 3

## CDEV 395 - Undergraduate Workshops

Special topics of interest to undergraduates and selected community members.
Credits: Variable

## CDEV 490 - Independent Study

A program of independent work con-ducted by a student who has demonstrated academic proficiency. Prerequisite: Permission of the instructor, advisor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## CHEM 104 - Introduction Chemistry I

This course is the first course in a two-semester sequence for non-science majors which introduces the fundamental principles of Chemistry. Although this course serves as a prerequisite for the next course in the sequence (CHEM 106), it is also designed as a stand-alone course. This allows students to take either this course alone or the two-semester sequence and still obtain a basic understanding of chemical principles. The principles of chemistry are developed and illustrated through selective application. Note: This course is not a substitution for CHEM 107 and students cannot receive credit for CHEM 104 and CHEM 107. Also note that this course does not serve as a prerequisite for CHEM 108.

Credits: 3

## CHEM 106 - Introductory Chemistry II

This is the second course in a two-semester sequence of an introductory chemistry course for non-science majors. The curse will build on the principles presented in CHEM 104 which is a prerequisite for this course and will focus on the areas of organic and biochemistry. As with CHEM 104, this course will concentrate on the basic principles of chemistry and illustrate them through selected applications.

## Prerequisites \& Notes <br> CHEM 104

Credits: 3

## CHEM 107-General Chemistry I

Topics include nomenclature, stoichiometry, kinetic-molecular theory, gas laws, electronic structure, periodicity, and chemical bonding. Stoichiometry is emphasized.

## Prerequisites \& Notes

ACSD 110 and co-requisites MATH 120 , or 125 or 225

Credits: 3

## CHEM 108-General Chemistry II

Topics include intermolecular forces, solutions, colloids, chemical kinetics, thermodynamics, equilibria (acid-base, solubility, and complex ion), electro-chemistry, and the transition elements.

Prerequisites \& Notes
CHEM 107

Credits: 3

## CHEM 110 - Contemporary Chemistry Laboratory

Laboratory to accompany Chemistry 103 providing basic chemistry and environmentally related experiences. One twohour laboratory per week.

Prerequisites \& Notes
Co-requisite: CHEM 104
Credits: 1

## CHEM 111 - General Chemistry I Lab

A laboratory to accompany CHEM 107. Laboratory experiments are designed to develop basic laboratory skills and illustrate concepts.

## Prerequisites \& Notes

Co-requisite: CHEM 107

Credits: 1

## CHEM 112-General Chemistry II Lab

A laboratory to accompany CHEM 108. Laboratory experiments illustrate the concepts of General Chemistry II.
Prerequisites \& Notes
CHEM 111 and co-requisite: CHEM 108

Credits: 1

## CHEM 113 - Clinical Chemistry Laboratory

Laboratory to accompany CHEM 103 providing basic chemistry and health-related experiences. One two-hour laboratory per week.

Co-requisite: CHEM 104

Credits: 1

## CHEM 200 - Fundamentals of Organic Chemistry

A one semester introductory course that covers the most commonly encountered properties of the major families of organic compounds. The course is designed for students pursuing a B.S. in environmental science. Not equivalent to CHEM 201.

Prerequisites \& Notes
CHEM 108, 112

Credits: 3

## CHEM 201-Organic Chemistry I

Modern theories relating molecular structure to chemical reactivity are stressed. Elucidation of molecular structure by infrared, ultraviolet, nuclear magnetic resonance and mass spectroscopy is also covered.

## Prerequisites \& Notes

CHEM 108, 112.

Credits: 3

## CHEM 202-Organic Chemistry II

Modern theories relating molecular structure to chemical reactivity are stressed. Elucidation of molecular structure by infrared, ultraviolet, nuclear magnetic resonance and mass spectroscopy is also covered.

Prerequisites \& Notes
CHEM 201

Credits: 3

## CHEM 211 - Organic Chemistry Laboratory I

A laboratory course in which students employ the synthetic techniques and analytical procedures of organic chemistry.

## Prerequisites \& Notes

CHEM 108 and 112, and co-requisite: concurrent registration in CHEM 201 or completion of CHEM 201

Credits: 1

## CHEM 212-Organic Chemistry Laboratory II

A laboratory course in which students employ the synthetic techniques and analytical procedures of organic chemistry.

## Prerequisites \& Notes

CHEM 211 and concurrent registration in CHEM 202 or completion of CHEM 202

Credits: 1

## CHEM 240 - Industrial Hygiene

Requirements to preserve worker health and safety will be surveyed.

## Prerequisites \& Notes

CHEM 107, 108, and 200

Credits: 3

## CHEM 270 - Industrial Chemistry

A study of industries with emphasis on economic, technical, and possible ecological factors affecting process design. Includes on-site lectures and discussions of various industries in the area.

Prerequisites \& Notes
CHEM 108, 112

Credits: 3

## CHEM 301 - Physical Chemistry I

Thermodynamics as applied to chemical and physical systems. Cross-listed with PHYS 301.
Prerequisites \& Notes
CHEM 108, 112, PHYS 212 or 213 and MATH 230

Credits: 3

## CHEM 302 - Physical Chemistry II

Quantum mechanics and spectroscopy.
Prerequisites \& Notes
CHEM 108, 112, PHYS 211, 212 or 213 and MATH 231

Credits: 3

## CHEM 321 - Physical Chemistry Laboratory I

Principles from Thermodynamic principles will be employed in the laboratory for determining and relating physical properties such as viscosity, surface tension, boiling and freezing points to the identity, and composition of chemical substances.

Prerequisites \& Notes
Co-requisite: CHEM/PHYS 301
Credits: 1

## CHEM 322 - Physical Chemistry Laboratory II

Applied principles from Physical Chemistry II lecture will be used for interpreting results from experiments involving kinetics, equilibria, and spectrophotometric data.

Prerequisites \& Notes
Concurrent registration: CHEM 302
Credits: 1

## CHEM 335 - Biochemistry

Investigates the basic theme of intermediary metabolism. A background for this study is gained through study of the chemistry of cellular constituents.

Credits: 3

## CHEM 336 - Biochemistry Laboratory I

A laboratory course in which the student uses techniques employed in biochemical investigations.
Prerequisites \& Notes
CHEM 212 and co-requisite: CHEM 335

Credits: 1

## CHEM 337 - Biochemistry II

The study of structures and physical properties of biological molecules.

Credits: 3

## CHEM 338 - Biochemistry Laboratory II

This is a one-credit course in biochemical techniques used in the investigation, isolation and purification of biomolecules. The student will get an exposure to and an appreciation for problem solving utilizing a research-oriented approach.

Prerequisites \& Notes
CHEM 336 and co-requisite: CHEM 337

Credits: 1

## CHEM 340 - Air Quality Assessment

A study of the quality of the air environment. Air quality assessment and potential problems will be examined both in lecture discussions and in laboratory or field situations. (Includes ambient air testing.) Three hours of lecture and three hours of laboratory per week.

## Prerequisites \& Notes

CHEM 108, 112

Credits: 4

## CHEM 350 - Analytical Chemistry

Topics include gravimetric and volumetric analysis of chemical systems. Special emphasis is given to titrimetric methods based on acid-base, complexation, and oxidation-reduction reactions.

Prerequisites \& Notes
CHEM 108, 112

Credits: 3

## CHEM 351 - Analytical Chemistry Lab

Students develop practical skills employed in the quantitative analysis of chemical systems.

Prerequisites \& Notes
CHEM 108, 112 and co-requisite: CHEM 350

Credits: 1

## CHEM 370 - Water Quality Assessment

Water quality assessment and water quality problems will be examined both in lecture discussions and in laboratory or field situations. Three hours of lecture and three hours of laboratory per week.

Prerequisites \& Notes
CHEM 108, 112

Credits: 4

## CHEM 415 - Forensic Anal

The application of analytical chemistry including instrumental methods to the investigation and interpretation of crime scene evidence.

Prerequisites \& Notes
CHEM 350, 351

Credits: 3

## CHEM 416 - Forensic Anal Lab

The application of instrumental methods of analysis to the interpretation of crime scene evidence.

Prerequisites \& Notes
CHEM 350, 351 and co-requisite: CHEM 415
Credits: 1

## CHEM 425 - Instrumental Analysis

A lecture course to introduce the student to the theory, advantages, disadvantages, limitations, and power of contemporary chemical instrumentation, including computational methods. Offered in alternate years.

## Prerequisites \& Notes

CHEM 108, MATH 225 and PHYS 211

Credits: 3

## CHEM 426 - Instrumental Analysis Laboratory

A three hour per week laboratory accompanying CHEM 425. Instrumentation and computing technology will be applied to quantitative problems of chemistry.

## Prerequisites \& Notes

Concurrent registration in CHEM 425 and knowledge of a computer language
Credits: 1

## CHEM 430 - Industrial Pollution Control Engineering

Economic and technical problems will be discussed as related to the abatement of harmful discharges from industrial sources. Systems analysis will be employed in the examination of engineering solutions in the physical or chemical treatment of discharge. Three hours of lecture per week or a field trip.

Prerequisites \& Notes
CHEM 108 and 112

Credits: 3

## CHEM 442 - Inorganic Chemistry

A lecture course covering atomic structure, bonding, and properties of inorganic compounds. Coordination chemistry and other topics of current research interest are covered. Offered in alternate years.

## Prerequisites \& Notes

Co-requisite: CHEM 302

Credits: 3

## CHEM 450 - Chemistry Internship

Supervised placement and research in selected public and private agencies. (Credits earned will be counted as free electives and will not be counted toward the chemistry major.)

## Prerequisites \& Notes

16 credits (minimum) in chemistry and Junior or Senior standing

Credits: 3 to 15

## CHEM 460 - Polymer Chemistry

A one semester introductory course that covers the synthesis, kinetics, properties, and applications of polymers.

## Prerequisites \& Notes

CHEM 202 or permission of the instructor

Credits: 3

## CHEM 475 - Advanced Organic Synthesis

A one semester course that includes an advanced organic chemistry synthesis laboratory. The lecture part covers modern synthetically useful reactions and their applications. The intensive laboratory offers the students an introduction to organic synthesis research, including the use of modern reagents and instruments. Students will become acquainted with techniques of preparation, purification and spectroscopic identifications of organic compounds.

## Prerequisites \& Notes

CHEM 202 and 212

Credits: 5

## CHEM 490 - Independent Study

Independent research under the guidance of a faculty advisor.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## CHEM 491 - Chemistry Seminar

For junior chemistry majors. On-line searches of the chemical literature lead to oral presentations and written reports in a selected area of research.

Credits: 1

## CHEM 496-Research

Offers a student the opportunity to carry out chemical research in the laboratory, employing all departmental facilities, and the experience of writing a thesis under the direction of a faculty mentor.

## Prerequisites \& Notes

Permission of the chairperson

Credits: 1 to 3

## CHEM 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## CHIN 101 - Chinese Language and Culture I

This course is the first in a three course series which will provide an introduction to the Mandarin language.

Credits: 3

## CHIN 102 - Chinese Language and Culture II

This course is the second in a three course series which will provide an introduction to the Mandarin language.
Prerequisites \& Notes
CHIN 101 or equivalent
Credits: 0

## CHIN 103 - Chinese Language and Culture III

This course is the third in a three course series which will provide an introduction to the Mandarin language.
Prerequisites \& Notes
CHIN 102 or equivalent for CHIN 103
Credits: 0

## CHIN 202 - Intermediate Chinese I

need a description

Prerequisites \& Notes
CHIN 103 or equivalent

Credits: 3

## CHIN 306 - Survey of Chinese Civilization and Culture

A study of the important aspects of China's culture, including its geography, history, social and political values, arts, sciences, literature, religion, and ideology. Course is taught in English and open to all interested persons.

Credits: 3

## COMM 110-Communication Concepts

An overview of basic theories concerning the communication process. Recommended as a basis for major study in the area.

Credits: 3

## COMM 112 - Message and Content Design

This introductory course involves the student in the study of message and content design. The student will be acquainted with the different stages in the development of communication projects and the elements.

Credits: 3

## COMM 115 - Visual Literacy

A cornerstone course that involves the study of visual forms of communication with an emphasis on image-based media (newspaper, magazine, film, television, photography, informational graphics, interactive multimedia, digital games and web-based technologies). Topics include visual interpretation, visual manipulation, visual conventions, the role of visual media and cultural processes and aesthetic appreciation.

Credits: 3

## COMM 200 - Public Speaking

Theory and practice of developing and presenting oral messages in a variety of communication contexts. Students will be expected to develop an understanding of the communication process and to demonstrate proficiency in speechmaking.

## Prerequisites \& Notes

ENGL 101 or equivalent and sophomore standing

Credits: 3

## COMM 201 - Digital Imaging

This course exposes students to the use and manipulation of electronically generated images through hands-on experience with digital cameras and scanners. Market specific imaging software is used to further enhance and manipulate imagery. Course topics include visual aesthetics, composition, image layering, photo-retouching, spatial relationships, compression techniques, digital painting, editing, color adjustment, filtering, image capture and file formatting.

## Prerequisites \& Notes

COMM/ART 115

Credits: 3

## COMM 215 - Small Group Communication

Communication problems and processes in small groups. Topics include role and nature of the small group, communication structure, problem-solving techniques, and leadership.

Credits: 3

## COMM 217 - Intercultural Communication

This course is designed to create a greater understanding of communication patterns and breakdowns which occur as members of one culture group interact with those of another culture group. This course will also foster an increased
awareness of particular skills and knowledge that can foster more effective intercultural communication.

Credits: 3

## COMM 231 - Introduction to Public Relations

This course seeks to introduce public relations students to the history, role, context of public relations, and the process through which public relations professionals establish and maintain lines of communication between an organization and its publics. As such, the course examines the nature of public opinion, methods of audience analysis, message design, and engages in skill development relevant to the professional practice of the public relations.

Credits: 3

## COMM 232-Publication Production

This course will be concerned with the nonverbal aspects of print communication, i.e., areas by which the communication process can be enhanced by the use of pictures, charts, graphs, white space, type faces and sizes, etc. It seeks to make students aware of the fact that print communication does not involve only words.

Credits: 3

## COMM 242 - News Writing

Basic course in journalistic news structuring techniques and straight news writing. Students write news stories and conduct news interviews.

## Prerequisites \& Notes

ENGL 101 or exemption

Credits: 3

## COMM 247 - Photojournalism

Photojournalism upholds the professional standards specific to newspaper photography and the recording of news events visually. Students are required to shoot assignments according to print standards on deadline. The course includes issues related to the specialization of shooting sports, spot news, features and special essays. Photographic processing and printing skills are also covered as part of the course content.

Credits: 3

## COMM 254 - Video Production

An introduction to video production as communication media. Emphasis on the processes and technologies of singlecamera production, including: (1) operation of audio and video recording equipment, (2) development of techniques for composition, lighting, scriptwriting, storyboarding, directing, and editing.

Credits: 3

## COMM 258 - Interactive Multimedia I

Emphasis on the emergence of contemporary, evolving technologies that use a variety of devices and techniques to marry images, graphics, text, voice, and music and enhance their effect with interactivity between user and the system.

## Prerequisites \& Notes

Any computer science course

Credits: 3

## COMM 262 - Broadcast Announcing

This skill course is intended to develop a mastery of voice techniques used in broadcasting. The course focuses on analytical and vocal techniques associated with on-air announcing for radio and television. Topics include voice analysis, pronunciation and articulation, broadcasting equipment and announcing for commercials, music, sports and news.

Credits: 3

## COMM 310 - Communication Research Methods

An introduction to the principles, procedures, and tools of research used in the analysis of the communication situation, including consideration of research design and statistical analysis and the identification, control, and measurement of communication variables. This course is a prerequisite or co-requisite for all upper division communication courses for majors.

Prerequisites \& Notes
COMM 110

Credits: 3

## COMM 312 - Argumentation

A study of argumentation as a decision making process. Course focuses on theories of argument, the roles of advocates and opponents, the nature of argument building, evidence, and reasoning and argument in various contexts.

## Prerequisites \& Notes

COMM 200. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 314 - Dyadic and Group Communication Processes

This is a theory-based course examining the process of communication in dyadic and group settings. Emphasis is placed upon (1) influences upon communication processes and resulting behavior and content and (2) the development of skills and skill assessment in both settings.

## Prerequisites \& Notes

COMM 215. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

COMM 315-Organizational Communication

A study of the communication behavior of persons in organizations. Considers the nature of organizations, communication structures in organizations, and the development of communication training in organizations.

## Prerequisites \& Notes

COMM 310 is a prerequisite or co-requisite for all majors

Credits: 3

## COMM 318 - Professional Presentation

Principles and applications of communication techniques and media for presentations and processes common to professional settings.

## Prerequisites \& Notes

Senior Standing, CPSC 110 or equivalent experience and familiarity with PC's and software recommended

Credits: 3

## COMM 332 - Case Studies in Public Relations and Integrated Communications

This advanced course seeks to develop critical thinking skills through the examination of audience-centered case studies. Students examine how professionals in public relations and integrated communications develop objectives that translate into communication campaigns, illustrating theoretical applications in real-life situations. The development of analytical skills and ethical guidelines in communications practice is emphasized.

## Prerequisites \& Notes

COMM 231. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 333 - Public Relations Writing

Course seeks to further develop the writing skills of public relations majors. Course assignments focus on expanding students' ability to make critical decisions regarding the process of gathering necessary information, identifying objectives, and creating appropriate messages for specific target audiences.

## Prerequisites \& Notes

COMM 231, 256

Credits: 3

## COMM 334 - Publication Production II

The course continues to expose students to the in-depth study of electronic publication issues, it specifically deals with design and layout issues related to newspapers, annual reports and other multiple-page publications. The course covers issues related to prepares, separations, advanced topography and paper selection.

## Prerequisites \& Notes

COMM 232

Credits: 3

## COMM 342 - Sports Journalism

Discussion of ethics and responsible sports journalism, sports information and public relations interview techniques, broadcast sports journalism. Guest lecturers in sports information, public relations, and broadcast journalism may speak on relevant topics.

Prerequisites \& Notes
COMM 242. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 343 - Feature Journalism

Course will focus on writing feature articles for newspapers and magazines.

## Prerequisites \& Notes

COMM 242 (Newswriting) or approval of instructor.

Credits: 3

## COMM 344 - The Editorial Function: Copy

Methods and practices of copy editing that are applicable to newspapers, magazines, and technical publications.

## Prerequisites \& Notes

Prerequiste: COMM 242. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 346 - Investigative Reporting

Application of advanced news writing, reporting and newsgathering techniques to produce in-depth, explanatory news stories on important public affairs issues.

## Prerequisites \& Notes

COMM 242. Also recommended COMM 245

Credits: 3
COMM 348 - Advanced Reporting

Instruction in writing the news story, discussions of reportorial ethics and techniques, and in-field coverage of news events, feature stories and speeches.

Prerequisites \& Notes
Prerequiste: COMM 242

Credits: 3
COMM 350 - Editing for Video

This course provides students with the opportunity to expand their knowledge of videotape editing. Special attention is given to expanding skill sets associated with A/B Roll and Digital Non-linear editing. Continued use of camera, lighting and sound techniques set the stage for an in-depth study of skills associated with program completion.

## Prerequisites \& Notes

COMM 254

Credits: 3

## COMM 353 - Media Project

This course is intended to develop student mastery of the emerging environment of digital information. The course focuses on data management, budgetary issues, strategy development, team dynamics, organizational behavior, time management and legal issues.

## Prerequisites \& Notes

COMM 359

Credits: 3

## COMM 354 - Television News and Studio Production

The course covers the process and techniques of multi-camera video production. Students gain experience in studio and control room operation and production roles. Students are introduced to television news reporting. The course trains students to write news stories and integrate news packages produced in the field for presentation in a multi-camera studio news broadcast. Students learn the style and format of broadcast news writing.

## Prerequisites \& Notes

Prerequistes: COMM 242, 254. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 355 - Television News and Field Production

An advanced course in the processes and techniques of single-camera field production and editing. Students will report, videotape, write, and edit packages for television news. During the course of the semester, students are assigned to cover a variety of news stories including spot news, political news, business news, sports news and light features.

## Prerequisites \& Notes

COMM 242, 254. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 359 - Interactive Multimedia II

This course provides students the ability to move beyond the traditional models of information distribution using image, sound, motion and text. The course introduces the fundamentals of communicating through digital interfaces with an audience. Topics include digital imaging, creating effective interactive projects, models of information structure, analysis of design problems and distribution models. Theories of communication, learning, human-centered design and project evaluation are discussed.

## Prerequisites \& Notes

Credits: 3

## COMM 360 - Corporate Media

The application of adult training theories, communication theories, and production skills in the planning, design, and implementation of media in the corporate and institutional setting, with emphasis on media management and the use of media in training and development.

## Prerequisites \& Notes

$110,232,254$, or consent of instructor. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 362 - Mass Media and Society

An introduction to the mass media that includes an examination of the historical development, current structure, and functions of the traditional and emerging media. The course will also explore the economic, legal, and ethical issues facing the media and introduce the interaction of the media and society, culture, and the individual.

Credits: 3

## COMM 363 - New-Media Journalism

An examination of new-media forms and the effects of new digital media on media industries and the practice of journalism. The course will examine the differences between traditional and new media journalism in theory and in practice and explore online writing techniques and the principles of computer-assisted reporting.

Prerequisites \& Notes
COMM 242

Credits: 3

## COMM 393 - Junior Seminar

The seminar is designed to assist students in conducting a self-assessment while exploring the corporate culture of the communication field. The student will develop a portfolio, attend job seminars, establish a credential file, conduct mock and actual interviews, participate in an on-site mentoring/shadow program and make a public presentation of their portfolio.

Prerequisites \& Notes
Junior standing, COMM 293 or approval of instructor

Credits: 1

## COMM 410 - Communication Law

Discussion of topics related to the field of mass communication (freedom of the press, libel, invasion of privacy, copyright, obscenity, regulations, ethics, and responsibility of the communicator and the agency).

## Prerequisites \& Notes

Senior standing and a major or minor in communication. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 412 - Speech, Language \& Human Experience

Study of verbal and nonverbal communicative behavior in terms of the form-function relationship, the relation-ship of communication to culture and situation, and communication as a mode cognition.

## Prerequisites \& Notes

Advanced standing. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 413-Communication Theory

A study of the significant theories of human communication that help to explain and predict the role of communication in determining the social, cultural, and political behavior of the community.

## Prerequisites \& Notes

Advanced standing. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 415 - Persuasion

This course will familiarize students with the processes of persuasion, the relationship of persuasion to other forms of human communication, methods for studying persuasion, the theories of persuasion and ethical concerns about persuasion. The perspectives and tools developed in this course should enable the student to develop effective message strategies in work and personal situations.

## Prerequisites \& Notes

COMM 110, 200. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 422 - History of Journalism

Tracing the history of American journalism from its early English European heritage to modern times. Emphasis on people, organization, and media that have helped establish the press as an American institution.

## Prerequisites \& Notes

Advanced standing

Credits: 3

## COMM 431 - Public Relations and Integrated Communications Campaigns

Course gives students a thorough experience in conducting public relations and integrated communications campaigns and preparing communication materials. Working in teams, students prepare and conduct the research, planning,
implementation and evaluation of an actual campaign for a client.

## Prerequisites \& Notes

COMM 332, 333. COMM 310 is a prerequisite or co-requisite for all majors. Also Recommended COMM 232 and/or 254.

Credits: 3

## COMM 441 - Issues in Journalism

Study of contemporary controversies and problems in journalism.

## Prerequisites \& Notes

Advanced standing. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 449-Communication Projects

This course provides students an opportunity to investigate, in-depth, approved topics in communication research or applied communication.

## Prerequisites \& Notes

COMM 31; permission of the instructor, successful completion of one 300 level communication course in the proposed area of study

Credits: 3

## COMM 450 - Internship

Supervised placement or research in selected private or public agencies.

## Prerequisites \& Notes

Junior status, 18 credits in the major, 2.500 QPA in major and 2.000 QPA overall. COMM 310 is a prerequisite or corequisite for all majors.

Credits: 3 to 12

COMM 455 - History of Broadcasting

Survey of the history and development of radio and television broadcasting in the United States.

Prerequisites \& Notes
COMM 310 is a prerequisite or co-requisite for all majors

Credits: 3

## COMM 458 - Media Criticism

A critical examination of film, television, and radio. The course focuses on the formation and application of standards for appraising media and their messages.

## Prerequisites \& Notes

COMM 251. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 459- Issues in Communication Technologies

An exploration of current and emerging communication technologies including their development and regulation, as well as the social, individual and ethical impact of these technologies.

## Prerequisites \& Notes

COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 460 - Interactive Multimedia III

This capstone course moves students into interactive learning development using online or computer-mediated distribution models. This course exposes students to learning applications used by corporate training developers, instructional designers and user-defined content developers. The course continues to build on the use of images, sound, animation, motion and text, but progressively enhances content development by adding interactive learning through user-defined interfaces. The course comprises projects that accent the role of in-house communicators and instructional designers.

## Prerequisites \& Notes

COMM 359

Credits: 3

## COMM 480 - The Communication Age

Presentation and discussion of the influences, trends, and issues that permeate the evolution toward a "Communication Age." Major issues and influences are examined, including significant technological developments and solutions that have been applied to communication needs and opportunities. Discussion addresses marketplace forces; humanistic, social, personal, and ethical issues; and the impact on organizations, workplace, home, education, government, and international functions. Major attention is given to the role of the impact on the individual amidst these far-reaching changes.

## Prerequisites \& Notes

Advanced standing. COMM 310 is a prerequisite or co-requisite for all majors.
Credits: 3

## COMM 490 - Independent Study

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted. COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## COMM 493 - Senior Seminar

The seminar is designed to assist students in conducting a self-assessment while exploring the corporate culture of the communication field. The student will further develop a portfolio, attend job seminars, conduct mock and actual interviews, participate in an on-site mentoring/shadow program and make a public presentation of their portfolio.

## Prerequisites \& Notes

Senior standing, COMM 393 or approval of instructor

Credits: 1

## COMM 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

## Prerequisites \& Notes

COMM 310 is a prerequisite or co-requisite for all majors.

Credits: 3

## CPSC 110 - Computer Concepts

A computer literacy course stressing the use of application software on personal computers. It covers a survey of computers and their impact on society and the use of word processing software. Other application software is also covered, such as spreadsheets and database software, but the particular applications examined may vary from section to section.

Credits: 3

## CPSC 130 - Introduction to Programming and Information Systems

An introductory course devoted to programming and to a description of hardware and software concepts. Programming concepts covered include top-down program development using pseudocode, algebraic notation, standard control structures, and arrays in an appropriate programming language. Other topics include binary representation, storage, and general architecture and functioning of a computer system.

## Prerequisites \& Notes <br> ACSD 110

Credits: 3

## CPSC 140 - Introduction to Programming Principles

Techniques are stressed that enable systematic development of clear, correct programs. Other topics include data types, algebraic notation, standard control structures, functions; input/output, arrays, and program testing and debugging.

Prerequisites \& Notes
ACSD 110

Credits: 3

## CPSC 150 - Advanced Programming Principles

This course places its emphasis on data and their role in software development. Such a study relies on a two-step approach to data abstraction. In the first step, data must be viewed as abstract objects. These objects are selected and specified so as to be useful in the solution of programming projects. In the second step, the abstract objects are translated into program data structures. An extensive examination of data structures provides the student many opportunities to explore the issues of implementing data abstractions.

## Prerequisites \& Notes

CPSC 140, and MGMT/ECON 219 or any Math course beyond MATH 120, or permission of instructor

Credits: 4

## CPSC 207 - System Software and Architecture for End Users

This course introduces the student to prevalent operating systems and the hardware and networking of those systems. User level commands in the current PC operating system and the Unix operating system for managing files, system utilities, and task management are introduced. The architecture of the PC and how it relates to the OS is discussed conceptually and physically examined. The hardware and software required for inter-connecting systems is discussed.

Credits: 3

## CPSC 210 - Productivity Software

An in-depth, practical study of existing productivity software packages that focuses primarily on decision-support systems for microcomputers. Projects will involve the use of intermediate and advanced features of various software packages, as well as the use of several packages in finding computer-based solutions to information storage and retrieval problems.

## Prerequisites \& Notes

Micro-computer proficiency

Credits: 3

## CPSC 217 - Structured and Dynamic Web Programming

This course is designed to cover the features of popular programming languages specifically for creating web pages. Mouse rollovers, browser detects, pop-up windows that launch when a web page loads or in response to specific actions, and form data-checking are just a few of the most popular uses of web programming languages that will be discussed. Programming will be done in a representative programming language.

Prerequisites \& Notes
CPSC 130, 140

Credits: 3

## CPSC 236 - Selected Computer Languages

A selected prevalent computer language(s) other than those taught regularly in other Computer Science courses will be studied and used for programming from an advanced point of view. Topics will include data structure, control structures, data control, modularization and other features of the language. Special applications, if any, of the language will be studied. The student is expected to have programming expertise in at least one other language. For different languages, this course may be repeated for credit toward graduation, but not toward a computer science major or minor.

Prerequisites \& Notes
CPSC 150

Credits: 3

## CPSC 300 - Challenges of Computer Technology

An in-depth study of the critical issues related to the computerization of society. Ethical, legal, and moral issues raised by the evolution of computer technology will be discussed.

## Prerequisites \& Notes

Advanced standing

Credits: 3

## CPSC 301 - Practical Computer Security

A practical introduction to the threats present to the online, electronic community, and how to protect yourself and your organization from them. We will explore the connectivity structure of the Internet, along with the security and criminal threats to members of the online community. The legal, ethical and technical issues related to threats such as viruses, worms, and identity theft will be covered.

## Prerequisites \& Notes

any CPSC course or permission of the instructor

Credits: 3

## CPSC 305 - Introduction to Expert Systems

An overview of the purpose, structure, and applications of expert systems. Topics covered will include expert systems technology, knowledge engineering, applications of expert systems, expert systems development, and the future of expert systems.

## Prerequisites \& Notes

CPSC 110 or microcomputer proficiency and advanced standing

Credits: 3

## CPSC 317 - Scripting Languages

This course emphasizes programming using scripting languages for the purpose of collecting and manipulating system information by system administrators and managers. Programming concepts such as data types and control structures will be discussed as well as operating system commands. A variety of languages and utilities will be discussed such as the Borne shell, Purl, awk, and the Common Gateway Interface. The student is expected to have programming experience and knowledge of the Unix and Windows environments.

## Prerequisites \& Notes

CPSC 207, 217

Credits: 3

## CPSC 323 - Data Base Systems

Database Systems is a study of relational database concepts as applied to comprehensive information systems. These concepts include data design; modeling; normalization; the use of Structured Query Language (SQL) to define, manipulate and test the database; programmatic access to a database; and practical issues faced by database developers.

## Prerequisites \& Notes

CPSC 130 or 140 or 210

Credits: 3

## CPSC 327 - Administration and Security

Students will learn administration techniques for at least two popular computer operating systems, with special attention to system security. Techniques for managing networking, remote printing, storage allocation, account management, and backup will be discussed. Common techniques for breaching system security, and methods of defense against such attacks, will be emphasized.

## Prerequisites \& Notes

CPSC 317

Credits: 3

## CPSC 343 - File Processing

A practical study of information storage and retrieval using computer data files. Fundamental file structures and organization are emphasized and exemplified through a programming language. Advanced file structures and organizations are discussed.

## Prerequisites \& Notes

CPSC 140 or permission of the instructor

Credits: 3

## CPSC 370 - Assembly Language and Machine Organization

Computer instruction sets, organization, and elementary architectural features are studied and used via programming in assembly language.

Prerequisites \& Notes
CPSC 150

Credits: 3

## CPSC 374 - Algorithms and Data Structures

This course establishes a foundation for the systematic study of algorithms and data structures. The integration of these two concepts into a single organizational structure emphasizes that algorithms and data structures are inseparably intertwined. This course builds and elaborates on the concepts introduced in CPSC 140 and 150.

## Prerequisites \& Notes <br> CPSC 150

Credits: 3

## CPSC 376 - Programming Languages

Programming languages are studied from the view of users. Features of common computer languages are surveyed along with developments in newer languages. The goal is deeper understanding of computer languages. Topics include compilation, interpretation, data types, data structures, binding, scope, control mechanisms, conversions, storage management, reliability, portability, modularity, documentation, implementation methods, and language extensibility.

Prerequisites \& Notes
CPSC 150

Credits: 3

## CPSC 378 - Theory of Computation

Both the classical and the contemporary theories of computation will be discussed in this course. The topics covered include the theory of automata and formal languages, computability by Turing machines and recursive functions, uncomputability, and proof of correctness of code.

## Prerequisites \& Notes

CPSC 150 and MATH 131

Credits: 3

## CPSC 413 - Systems Analysis

A course in computer-based information systems. Course content includes: foundations of information science, techniques for system development, information architectures, and resource allocations. Case studies are discussed and utilized as class projects.

## Prerequisites \& Notes

CPSC 323

Credits: 3

## CPSC 423 - Computer Networks

This is an introduction to computer networks and data communications. Course content includes: the layered model; transmission and multiplexing; data link protocols; packet, point-to-point, and satellite transmission; local area networks; security and privacy. Examples of some well-known networks will be studied.

## Prerequisites \& Notes

CPSC 150

Credits: 3

## CPSC 427 - Interface Design

This Information Technology majors' course uses graphical user interface design concepts to introduce interface design possibilities. This senior-level course requires students to produce an intricate interface that utilizes systems design, information management, systems administration and security, and programming concepts from lower-level courses. This course is intended as a capstone course that introduces human user interface theory and practice.

## Prerequisites \& Notes

CPSC 413 and CPSC 317

Credits: 3

## CPSC 443 - Software Project Management

An introduction to project management in the information systems, or IT development, area. Provides an understanding of the purpose, methods and benefits of process management by exposing the student to the concepts, practices, processes, tools and techniques used in process management for software development.

Prerequisites \& Notes
CPSC 210 or 207

Credits: 3

## CPSC 450 - Internship

Professional work experience performed as an intern at selected agencies supervised both by the agency and by the Computer Science Department.

## Prerequisites \& Notes

Computer science or information systems major with junior or senior standing, 2.750 QPA overall, 3.000 major QPA and application to the department one semester prior to the term in which the internship is to be undertaken

Credits: 3 to 12

## CPSC 456 - Introduction to Computer Graphics

This course introduces the basics of interactive computer graphics including software and hardware requirements for computer graphics systems, graphics data structures, algorithms and programming languages, raster and random display devices, and graphics applications. Students will work with dedicated graphics computers in completing laboratory exercises and course projects.

## Prerequisites \& Notes

CPSC 374 or permission of the instructor
Credits: 3

CPSC 464 - Principles of Concurrent Programming and Operating Systems

An introduction to operating systems with emphasis on fundamental principles. These include store management, processor management, file systems, and input/output. Laboratory exercises are assigned using a language that supports concurrency. Distributed and "real time" illustrations are used, as well as standard operating system illustrations.

## Prerequisites \& Notes

CPSC 374, 376 and 378

Credits: 3

## CPSC 466-Compiler Design and Implementation

This is an introduction to language translation. Topics include specification of languages and its relation to automata, lexical analysis, finite state machines, context free languages, LL and LR parsing methods, syntax directed translation, error recovery, code generation, and portability.

## Prerequisites \& Notes

CPSC 374, 376 and 378

Credits: 3

## CPSC 474 - Computer Architecture

Architectural features of computer systems are studied. Central processors, storage systems, various forms of parallelism, microcode, and system performance are included as central topics. Hardware support for vector operations, programming languages, concurrency, and distributed processing are included, along with salient architectural features of concurrent integrated processors.

## Prerequisites \& Notes <br> CPSC 374

Credits: 3

## CPSC 476 - Artifical Intelligence

A survey of artificial intelligence topics including heuristic programming, search techniques, knowledge representation, expert systems, vision and speech in automators, pattern recognition, and robotics.

## Prerequisites \& Notes

CPSC 374 or permission of the instructor

Credits: 3

## CPSC 478 - Analysis of Algorithms

An advanced study of algorithms and data structures. Analysis of algorithms, space and time complexity, and the NP classes will be considered. Significant illustrative individual or group programming projects are required. Examples may be drawn from heuristic programming, encipherment, natural language processing, object code generation, combinatorial analysis, graphics, robotics, relational databases, or other algorithmic issues of current importance.

## Prerequisites \& Notes

CPSC 374 or permission of the instructor

Credits: 3

## CPSC 488 - Software Engineering

The course is the study of software engineering principles and design. The course will emphasize requirement analysis, design, testing, debugging and implementation of a semester long project. Students will work in groups for the project to be implemented. There will be multiple phases for the design and implementation of the project. The project will be implemented using a standard programming environment.

## Prerequisites \& Notes

CPSC 374 or permission of the instructor
Credits: 3

## CPSC 490 - Independent Study

Supervised study in a special interest area. Prerequisites: Two computer science courses selected from 370 or above, permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## CPSC 498 - Selected Topics

The in-depth examination of a specific topic. For different topics, this course may be repeated for required elective credits toward a computer science major or minor.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1 to 3

## DANC 100 - Introduction to Dance

This course will include a comprehensive overview of dance as an art form, entertainment, and social activity. A broad historic overview of dance will be presented, as well as information on the role of the dancer, choreographer, and audience. Specific dance genres such as ballet, modern, jazz, and world dance will also be the focus of this course.

Credits: 3

## DANC 101 - Wellness for Dancers

This course will cover conditioning, relaxation, and injury prevention techniques specific to the needs of dancers. Students will be assessed in all areas to determine strengths and deficiencies, and programs will be developed to allow each student to work on their individual assessments. Pilates-based conditioning and Bartenieff Fundamentals will also be included.

Credits: 1

## DANC 105 - Dance Fundamentals

Students will explore the elements of dance through creative activities and have movement experiences in the dance genres of folk, square and social dance. Students will gain an understanding of dance as an academic discipline, as well as the importance of dance as an art form, entertainment, and life-long social/recreational activity.

Credits: 1

## DANC 112 - Tap Dance I

Various techniques, styles, and tap dance steps will be explored in this course. A historical overview of tap dance and its development as an American art form (with African and European connections) will be presented and discussed. Combinations of steps and dance compositions, both student and instructor created, will be learned and performed. Previous tap dance experience is beneficial, but not required.

Credits: 1

## DANC 120 - Modern Dance I

This beginning level class sets the foundation for all modern dance experiences, introducing the student to the concept of proper alignment; the ability to demonstrate and synthesize corrections and comments; the basic movements of modern dance (including the correct vocabulary and technique); a knowledge and understanding of the elements of dance-space, time and energy; an understanding of performance and performing; and an understanding of dance as an art form.

Credits: 1

## DANC 121 - Ballet I

The beginning student will develop a basic understanding of ballet terminology and technique and develop artistry through performance.

Credits: 1

## DANC 122 - Jazz Dance I

Jazz I focuses on establishing a basic foundation in jazz with emphasis on proper alignment, technique, and the unique stylistic components of Jazz.

Credits: 1

## DANC 199-LMA/Performance Techniques

This course is designed to build on the performance principles learned in Composition I and technique classes. The student will deepen their awareness of the techniques of performance through exploring Laban Movement Analysis and investigating the elements of performance.

Credits: 1

## DANC 200 - Dance Composition

This course will be an introduction to the elements of dance (space, time, and energy) and to the practice, theory, and art of dance composition. Experiences in solo and ensemble compositions will focus on improvisation, and lead to
understanding content, aesthetics, creating, structuring, and ultimately choreography.

Credits: 3

## DANC 216 - Principles of Dance Production

This course provides knowledge and practical experience in the many aspects of dance production and performance. Areas of study will include: auditions, theories and techniques of rehearsals, lighting, make-up and costuming for dance, audio and video recording procedures, and the technical requirements for dance production and performance.

Credits: 3

## DANC 220 - Modern Dance II

This second level class is a furthering and continuation of setting the foundation established in Modern I, providing students with the information and the tools needed to extend technique, skills and performance quality. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 221 - Ballet II

This course will develop technique and artistry, and will include barre and center exercises of increased complexity and difficulty. The student will develop precision in executing movements and develop the facility to learn movements quickly. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 222 - Jazz Dance II

This intermediate level class is a furthering and continuation of setting the foundation in jazz dance. This second level jazz technique course is designed to refine and enhance the student's performance skills, technique, and stylistic approaches to jazz dance leading to proficiency in jazz technique. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 223 - Introduction to Creative Dance

This course is the foundation course for the student who desires to develop personal skills in teaching methods of creative dance. The teaching and learning process as it applies to children's dance and creative movement will be explored.

Credits: 1

## DANC 224 - Improvisation

This course provides the student opportunities to explore the processes of discovering, creating and performing movement spontaneously.

Credits: 2

## DANC 271 - Dance Technology

This course will introduce the student to three software packages for Macintosh with specific creative applications to dance as an art form. Software includes computer choreography (Life Forms), digital video recording and editing (Adobe Premiere), and interactive authoring (Authorware).

Credits: 3

## DANC 300 - Dance Composition

This second level of dance composition will include creating choreography based on specific forms of movement and music, emotion oriented and movement oriented dances, dances utilizing props and sets, and site-specific dance.

## Prerequisites \& Notes <br> DANC 100

Credits: 3

## DANC 305 - Dance

Social dance, like society itself, is not static. It mirrors the culture in which it exists by reflecting the past, present and any intercultural exchanges that have occurred. The everchanging human scene is absorbed and acted out through dance. This course will examine the relationship between social dance and the social, political and cultural climate of the society within which the specific dance forms were created and performed. Students will be given the opportunity to "make history come alive" through classroom discussions, selected readings on various topics integral to social dance and society, and studio-based experiences relative to specific dance forms, styles and unique movement characteristics of the time periods under investigation. Special emphasis will be placed on 20th century American social dance forms and styles.

## Prerequisites \& Notes

*No prerequisites. *Introduction to DANC 62100 highly recommended.

Credits: 3

## DANC 318 - Dance History I: Primitive to the Nineteenth Centruy

This course examines the historical and philosophical aspects of dance as an art form and as a social and cultural medium from primitive times through the nineteenth century. The focus in on approaches, styles, and contributions of leading dance artists of the historical eras.

Credits: 3

## DANC 320 - Modern Dance III

This third level requires the student with an established foundation in modern dance to extend their knowledge and acquire additional understanding of technical material and performance quality. Course may be repeated for a maximum of 6 credits.

Prerequisites \& Notes
DANCE Permission of the instructor

Credits: 2

## DANC 321 - Ballet III

Exercises learned in levels I and II increase in speed, complexity and duration in level III. New movements and their terminology will be introduced. Emphasis is also placed on the development and improvement of the student's performance qualities. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 322 - Jazz III

This advanced level class requires the student with a proficient level in jazz dance to extend their knowledge and acquire additional understanding of technical material and performance quality. Emphasis will be placed on the attainment of artistic qualities essential for the performance of jazz dance repertory. Course may be repeated for a total of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 323 - Teaching of Dance

This course is designed to introduce students to the theory and practice of sound dance teaching. Information on critical thinking, teaching and learning styles, imagery, diversity, and assessment will be explored. Students' abilities and strengths as teachers will be assessed and evaluated throughout the semester. This course must be taken with Field Experience, DANC 350, which allows the students to have practical teaching experiences.

Prerequisites \& Notes
DANC 223 and co-requisite DANC 350
Credits: 3

## DANC 324 - Music for Dance

This course is designed to provide students with information regarding music for dance performance, production, and accompaniment.

Credits: 3

## DANC 326 - Dance Kinesiology

This course includes the study of human movement specific to dance, with emphasis on the anatomical principles and the laws of physics as they apply to dance technique and performance. The course includes structural and neuromuscular analyses including individual analysis of alignment, muscular imbalances, body types, conditioning needs and movement behavior.

Credits: 3

## DANC 350 - Field Experience

Field Experience provides the opportunity for students to teach in private studios, recreation centers and/or the public/private school systems. To be taken concurrently with DANC 323.

Prerequisites \& Notes
DANC 223 and co-requisite: DANC 323

Credits: 1

## DANC 399 - Repertory

This course provides students with an in-depth experience in an aspect of dance, i.e., repertory, rehearsal and performance, or pointe work. Course may be repeated for a total of 4 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1

## DANC 400 - Dance Composition III

This third-level of dance composition will allow the student to work with a faculty member on a one-to-one basis, and choreograph full length dances (solo and group).

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## DANC 419 - Dance History II: Twentieth Century

This course examines dance in the 20th century, including ballet, jazz, modern and world dance genres. The aesthetics and philosophies of leading dance artists will be explored.

Credits: 3

## DANC 420 - Modern Dance IV

This fourth level of modern dance is for the student who demonstrates a strong technical foundation, and accurately performs dance movements and combinations consistently. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

## Credits: 2

## DANC 421 - Ballet IV

In this advanced course, the student will review the content of levels I-III and will learn advanced-level movement and terminology. The focus of the course will be on technique and artistic presentation. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor
Credits: 2

## DANC 422 - Jazz IV

This fourth level technique course is designed to enhance the student's development of performance skills, technique, and styles of jazz dance. Emphasis will be placed on the attainment of artistic qualities essential for the performance of jazz dance repertory at a pre-professional level. Course may be repeated for a total of 4 credits.

## Prerequisites \& Notes

Permission of the instructor

## Credits: 2

## DANC 425 - Senior Synthesis

Advanced level research, writing and discussions will lead to the development, production, and presentation of the student's senior project (to be determined by the student and faculty). Philosophical aspects of dance, aesthetics, and dance as an art form will be the basis of this course. Practical experiences in resume and grant writing, graduate school applications, interviews, and career planning will be covered.

## Prerequisites \& Notes

All dance major core courses, demonstrated technical proficiency and senior standing. DANC 100, 101, 199, 200, 216, $223,224,300,318,323,324,326,350,419,420,498$, Level III proficiency in Ballet and Jazz. In addition to these prerequisites, dance majors enrolled in Senior Synthesis must register for a minimum of 2 semester hours of dance technique during the semester in which they take Senior Synthesis. In addition to the prerequisited, dance majors enrolled in Senior Synthesis must register for a minimum of 2 semester hours of dance technique during the semester in which they take Senior Synthesis.

Credits: 3

## DANC 426 - Modern Dance V

This fifth level modern dance course is for students who can demonstrate total integration of technique and performance, including a sensitivity to aesthetic concepts. Students will focus on the following: a continual refinement
and advancement in the level and knowledge of technique, quality of performance, and aesthetic concepts; a clear understanding of dance as a profession and demonstrated professionalism and maturity. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 427 - Ballet V

This advanced-level course is designed to augment a modern dancer's performance skills through ballet technique. Emphasis will be on new movements, their terminology, and practice of the techniques. Artistic development and movement execution will receive extensive attention, as well as refinement of line and style. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 428 - Modern Dance VI

This sixth level modern dance course is for the student who can execute technique and performance at an advanced level and knows, understands, and can demonstrate dance theory and concepts. This course is for the dancer who is at the pre-professional level. Course may be repeated for a maximum of 6 credits.

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## DANC 429 - Ballet VI

This course focuses on a pre-professional level of advanced ballet technique. Emphasis is placed on refinement of technique, performance quality, and preparation for professional dance. Course may be repeated for a maximum of 6 credits

## Prerequisites \& Notes

Permission of the instructor

## Credits: 2

## DANC 450 - Dance Internship

Supervised placement and research in an appropriate agency. For further information, contact the Department of Dance.

Credits: 3

## DANC 498 - Selected Topics: World Dance

This course is an in-depth examination of a world dance genre, including but not limited to: Butoh, Classical Indian Dance, African Dance, Hula, Flamenco, Hip-hop or

## Prerequisites \& Notes

Permission of the instructor

Credits: 2

## ECON 105 - Economics of Social Issues

As an introductory course, it is intended to provide an understanding of how our economic system works. It examines the forces that determine what, how much and who obtains the outputs of the economy, and explains the issues behind current economic problems. A framework of building blocks from micro, macro, and international economics is developed to enable students to comprehend the differences among alternative solutions and to understand the implications of policy issues constantly confronting a mixed dynamic economy.

Credits: 3

## ECON 201 - Pinciples of Macroeconomics

Definition of economics; concepts and institutions; demand, supply and the price system; national income; employment and fiscal policy; monetary policy; economic stability and growth.

Credits: 3

## ECON 202 - Principles of Microeconomics

Economics of the firm; resource allocation; price and output determination; market structure; current economic problems; international economics.

Credits: 3

## ECON 211 - Real Estate Finance

The study of nature and scope of real estate, factors affecting demand and supply, property rights, title, deeds and title closing, sources of financing, real estate valuation, taxes, leveraged buy-outs, and real estate investment decision.

Credits: 3

## ECON 219 - Business Statistics

Probability and statistics in a business environment encompassing descriptive statistics, probability theory, hypothesis testing, linear regression and correlation. Prerequisites: Algebraic proficiency and microcomputer proficiency. Crosslinked as MGMT 219.

Credits: 3

## ECON 301 - Macroeconomic Analysis

Determination of national income and employment. National income accounts as measures of aggregate economic behavior. Analysis of income stability, unemployment, inflation and growth.

## Prerequisites \& Notes

Econ 201, 202

Credits: 3

## ECON 302 - Microeconomic Analysis

Intermediate price theory including theories of demand, supply, production, resource allocation, market structure, general equilibrium and risk analysis.

Prerequisites \& Notes
ECON 201, 202

Credits: 3

## ECON 304 - Mney and Banking

Emphasis is upon monetary policy, how it is implemented, the theories on which it is based, and the implication of this policy on our economy.

Prerequisites \& Notes
ECON 201

Credits: 3

## ECON 306 - Comparative Economic Systems

Analysis of resource allocation within capitalist, socialist, communist and fascist systems.

## Prerequisites \& Notes

Econ 201, 202

Credits: 3

## ECON 307 - Urban Economics

Analysis of the economic functions and problems of modern urban areas including theoretical and practical proposed solutions.

Prerequisites \& Notes
ECON/FIN 201, 202

Credits: 3

## ECON 312 - Critical Choices in Health Care Policy

This course analyzes the health care sector. It presents reasons for the growth in health care expenses, assesses how and why they are likely to grow, and details policy options that confront health care administrators, consumers, employers, and government officials.

## Prerequisites \& Notes

ECON 202

Credits: 3

## ECON 315 - Environmental Economics

Economic causes and effects of pollution. Evaluation of costs, benefits and risks of alternative solutions to the problem of damage and destruction of the environment.

Prerequisites \& Notes
ECON 202

Credits: 3

## ECON 316 - Evolution of Economic Thought

This course provides a look at economics from an historical perspective. Original works of many early economists will be examined. Ideal for anyone interested in how our economic system has developed.

Prerequisites \& Notes
ECON 201

Credits: 3

## ECON 318 - Intermediate Statistical Analysis

Statistical analysis encompassing multiple regression and correlation, ANOVA (simple and multivariate), goodness of fit, statistical decision analysis, and advanced forecasting techniques.

## Prerequisites \& Notes

ECON 219 or MGMT 219 or permission of the instructor
Credits: 3

## ECON 360 - Labor Economics

An investigation of labor markets and the effect of institutional forces on employment, wage determination, stability, and the availability of labor.

Prerequisites \& Notes
ECON 202

Credits: 3

## ECON 402 - Public Finance

Nature, incidence and economic effects of taxation; government spending; public debt management; fiscal administration.

Credits: 3

## ECON 405 - Industrial Organization

Examines the reasons for different market structures and how the structure influences the strategies of firms and their profits. Particular attention is paid to the role of advertising and product differentiation in a firm's attempt to create or sustain economic profits. The course stresses the conditions in which government regulation of an industry is warranted plus highlights obstacles to effective regulations. Prerequisite: ECON 202.

Prerequisites \& Notes
ECON 202

Credits: 3

## ECON 407 - International Economics

Alternative exchange rate systems, commercial trade policies, balance of payments, adjustment mechanisms and the role of international financial organizations.

Prerequisites \& Notes
ECON 201, 202

Credits: 3

## ECON 408 - Development Economics

Study of the growth process including institutional problems, political, cultural and technological problems, development theories, planning and programming.

## Prerequisites \& Notes

ECON 201, 202

Credits: 3

## ECON 412 - Economics Seminar

Application of advanced economic theory for problem solving and research. Topic selection will vary with instructor.

## Prerequisites \& Notes

ECON 301, 302 or permission of the instructor

Credits: 3

## ECON 415 - Trade Flow Analysis

Brings to bear the principles of comparative advantage, the factors proportions theorem, and the regional theory of world trades on the analysis of trade flows and economic growth.

Credits: 3

## ECON 490 - Independent Study

In-depth reading and/or research in an area of particular interest to the student, with the guidance of a faculty member. Prerequisites: 12 hours of major courses, application, and permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## EGEO 100 - Environmental Geology

Problems of mineral, energy and water resources, waste disposal, soils and health, geologic hazards, and land use.

Credits: 3

## EGEO 101 - Physical Geology

Emphasis is placed upon those processes acting to create earth materials, landforms, and structures in and on the earth.

Credits: 3

## EGEO 102 - Historical Geology

The evolutionary history of the earth and its life. Two Saturday field trips required.

## Prerequisites \& Notes

EGEO 101, 111 and concurrent registration in EGEO 112

Credits: 3

## EGEO 103/303 - Concepts of Evolution and the Fossil Record

An introduction to the fossil record and evolution of life through earth history, including the nature of science, marine and land dwelling organisms and basic theories of evolution and extinction of organisms. Students registering for 303 will be required to do additional work and take more comprehensive exams than the students registered in 103.

## Prerequisites \& Notes

Concurrent registration in EGEO 304 is requied for EGEO 303

Credits: 3

## EGEO 110 - Environmental Geology Lab

Complement of EGEO 100; laboratory study of geologic hazards and geologic resources, including resource depletion and waste disposal issues. Course requires a weekend field trip to pertinent regional destinations. )

## Prerequisites \& Notes

EGEO 100 must be taken prior to or concurrently
Credits: 1

## EGEO 111 - Physical Geology Lab

Complement to EGEO 101; laboratory studies of minerals, rocks and maps illustrate the concepts of EGEO 101.

## Prerequisites \& Notes

EGEO 101 must be taken prior to or concurrently

Credits: 1

## EGEO 112 - Historical Geology Lab

Complement to EGEO 102; introduction to fossils, interpretation of geologic maps, and principles used in historical geology.

Prerequisites \& Notes
EGEO 101, 111 and concurrent registration in EGEO 102

Credits: 1

## EGEO 121 - Meteorology

Introduction to principles controlling weather and their effect on people and the environment. Includes lab.
Credits: 3

## EGEO 131-Oceanography

Introduction to the physical, chemical and biological aspects of the marine environment.

Credits: 3

## EGEO 201 - Earth Materials

Identification of rocks and minerals based on observation and study of physical properties. Origin, occurrence, and value of earth materials. Includes lab.

Credits: 3

## EGEO 221 - Weather and Climate Forecasting

An analysis and use of local and regional computer-collected surface and upper air weather data to forecast weather. A study of past records of climate as clues to future changes. Includes lab.

Prerequisites \& Notes
EGEO 121

Credits: 3

EGEO 231 - Aerial Photography Interpretation

Introduction to photogrammetry, remote sensing, and interpretation of geologic and cultural imagery.

## Prerequisites \& Notes

EGEO 101 or 201 or permission of the instructor

Credits: 3

## EGEO 241 - Geomorphology

A study of landforms, their origin and relation to geologic processes, structure, and climate.
Prerequisites \& Notes
EGEO 111

Credits: 3

## EGEO 242 - Glacial Geology

A study of erosional and depositional landforms left by glaciers and their meltwaters. Glacial landforms and soils are examined on maps, air photos and in the field.

Prerequisites \& Notes
EGEO 111

Credits: 3

## EGEO 251 - Aviation Meteorology

This course is a study of weather conditions commonly encountered in aviation. The subject is treated from the viewpoint of the forecaster and the pilot. Includes lab.

Prerequisites \& Notes
EGEO 121

Credits: 3

## EGEO 271 - Geotechniques: Lab

Training in laboratory techniques and instruments for geological, geophysical and environmental surveys.
Credits: 2

## EGEO 272-Geotechniques: Geologic Reports

Training in the use of library facilities and bibliographies, literature searches, construction of index cards, writing of abstracts and technical reports, and oral reporting.

Prerequisites \& Notes
EGEO 102, ENGL 103, COMM 200 (can be taken concurrently) or permission of instructor
Credits: 1

## EGEO 281 - Quantitative Methods

Review of mathematical techniques and principles. Training in the application of quatitative methods to the understanding and analysis of geological and environmental problems. Students will apply a variety of mathematical techniques to a range of geological and environmental problems. Emphasis will be placed on practical applications of quantitative methodology and the development and use of spreadsheets to manage, analyze, and present data sets.

## Prerequisites \& Notes

EGEO 102, MATH 125
Credits: 2

## EGEO 304 - Paleontology Laboratory

Laboratory examination of invertebrate fossils, and selected chordates (graptolites and conodonts), including morphology, taxonomy, identification, laboratory preparations and biostratigraphy. One weekend field trip is required.

## Prerequisites \& Notes

EGEO 112 and 271 or permission of the instructor; co-requisite: EGEO 303
Credits: 1

## EGEO 323 - Planetary Geology

Systematic study of geological processes that have operated on the planets, natural satellites, and minor bodies in the Solar System. Course will cover solar system formation and evolution, planetary interiors, surficial processes, the structure and history of individual planetary bodies. Quantitative techniques will be used to examine data from current and historic exploration missions.

## Prerequisites \& Notes

EGEO 102, 281

Credits: 3

## EGEO 327 - Structural Geolgoy

Origin and description of primary and secondary structures of sedimentary, igneous, and metamorphic rocks.
Prerequisites \& Notes
EGEO 112, 272

Credits: 3

## EGEO 328 - Plate Tectonics

Plate tectonics is the study of the motion of the lithosphere and deformation of the earth's crust on a regional scale. The course will evaluate the plate tectonic paradigm in terms of its historical evolution and modern application to understanding earth processes. The course examines a broad range of tectonic phenomena and considers the specific geological and geophysical processes involved. Topics covered include the uplift, deformation and metamorphism of
mountain belts, the formation of ocean basins, the subsidence of sedimentary basins, the collision of continents and volcanic arcs, earthquake seismology of plate boundaries, magmatism related to plate processes, and tectonics and landscapes.

Prerequisites \& Notes
EGEO 102, 112

Credits: 3

## EGEO 340 - Air Pollution Meteorology

A study of meteorological parameters of air pollution concentration, dispersion, and removal. Includes air pollution forecasting and modeling.

## Prerequisites \& Notes

EGEO 121

Credits: 3

## EGEO 351 - Mineralogy

Systematic crystallography, crystal chemistry, physics, genesis, occurrence, and identification of minerals.

## Prerequisites \& Notes

EGEO 111, 271, 272, CHEM 108, 112 and permission of the instructor
Credits: 4

## EGEO 352 - Petrology

Classification, occurrence, and genesis of igneous, sedimentary and metamorphic rocks. Identification using hand specimens and polarizing microscope (thin sections).

Prerequisites \& Notes
EGEO 351

Credits: 4

## EGEO 360 - Introduction to Hydrology

A study of the occurrence and movement of water and human's effect on this basic resource.

## Prerequisites \& Notes

EGEO 101 and 201 or permission of the instructor

Credits: 3

## EGEO 362 - Stratigraphy

Principles of stratigraphy, stratigraphic mapping, and graphic techniques used in stratigraphic interpretation. Two Saturday field trips may be required.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted

Credits: 3

## EGEO 448 - X-ray Spectrometry

Concepts of x-ray production and interaction with crystalline materials. Application of x-ray diffraction methods for identification of minerals, and x-ray fluorescence techniques for chemical analysis. One lecture and one two-hour laboratory per week.

## Prerequisites \& Notes

CHEM 107 and EGEO 201
Credits: 3

## EGEO 450 - Internship

Supervised placement and research in selected public and private agencies.

## Prerequisites \& Notes

Permission of chairperson
Credits: 3 to 12

## EGEO 451-Geochemistry

Basic thermodynamics applied to the geochemistry of natural systems. The course will focus on low temperature inorganic reactions that are important for the environmental fate and transport of contaminants in the environment. The course will require the use of computer spreadsheets and models to solve geochemical problems covered in lecture. Three hours of lecture and one hour of computer lab.

Prerequisites \& Notes
CHEM 108, 112 and EGEO 201 or equivalent
Credits: 4

## EGEO 453-Geotechniques: Geochemistry

Laboratory and field experiments to study the geochemistry of local environmental systems. Field sampling, in-field and laboratory analysis, and construction of experimental systems will be conducted. Field trips for sample collection will occur weekly.

Prerequisites \& Notes
EGEO 451 or permission of the instructor
Credits: 1

## EGEO 460 - Hydrogeology

A study of the quantitative and qualitative interrelationships of geologic materials and processes with ground water.

## Prerequisites \& Notes

EGEO 360 or permission of the instructor

Credits: 3

## EGEO 476-Geotechniques: Geophysics

Lab and field techniques.
Prerequisites \& Notes
EGE 460 and permission of the instructor
Credits: 1

## EGEO 481 - Geologic Map Interpretation

A seminar for advanced undergraduates in whom students and staff participate in map interpretation. One two-hour lab per week.

Prerequisites \& Notes
Senior standing or permission of the instructor
Credits: 1

## EGEO 482 - Senior Seminar

A seminar for advanced undergraduates in which students and staff participate in discussions concerning classical and current geological problems.

## Prerequisites \& Notes

Senior standing or permission of the instructor
Credits: 1

## EGEO 490 - Independent Study

Independent work on a topic in the earth sciences selected by the student with permission and advice of the instructor.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## EGEO 498 - Selected Topics

The in-depth examination of a specific topic. The topic selected and its treatment depend on the instructor.
Credits: 1 to 3

## ELEC 281 - Cultural Awareness in the Elementary Classroom

Candidates will be introduced to the theory and practice of cultural and diversity issues for success in today's elementary classrooms. They will study the impact of culture on education and become familiar with effective strategies for culturally relevant teaching through reflective inquiry and field-based educational experiences.

## Prerequisites \& Notes

Sophomore Standing; Co-requisite: ELEC 288.
Credits: 3

## ELEC 288 - Children's Literature

This course introduces candidates to the values of children's literature and the wide range of genre available for enhancing the development and learning of children. Course content includes identifying and selecting outstanding literature for literacy content, children's needs and interests, multicultural perspectives, and curriculum enrichment. A field component includes the opportunity for candidates to implement strategies for the creative presentation of literature and the stimulation of creative responses by school-aged children.

## Prerequisites \& Notes

Prerequiste: Sophomore Standing; Corequisite: ELEC 281.
Credits: 3

## ELEC 301 - Math/Science Teaching Lab

Provides students with a myriad of opportunities to: identify and develop basic teaching skills, design and implement math and science lessons for peers and school-aged children, and reflect/analyze lessons in light of science and math education research findings. Throughout the course, candidates will have the opportunity to actually experience classroom teaching when possible.

## Prerequisites \& Notes

Admission to the College of Education; ELEC 281, 288; Co-requisites ELEC 342, 362.
NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 1

## ELEC 303 - Literature in Early Childhood Education

This course presents an overview of the value of children's literature in early childhood education, the range of genre appropriate for this age group, and effective strategies for providing rich literary experiences for young children which cultivate a love of books and reading.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 306 - Early Childhood Education I

Research, history, philosophy, current trends and observations with emphasis on the nature and nurture of the young child from birth through third grade.

## Prerequisites \& Notes

Minimum overall QPA, professional conduct standards, and major QPA prerequisites may apply; details are available in the department office or from the student's advisor.

Credits: 3

## ELEC 308 - Folk Literature and Storytelling

Combines a study of traditional literature with practice in the best methods of presenting it orally. Oral presentations include a preschool story hour, folk tale, and myth or literary fairy tale. The course also emphasizes the importance of puppetry in education and recreation.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 317 - Child and Family Development in Early Childhood

This course is a theoretical, in-depth examination of physical, intellectual, social-emotional, language and family development from birth through age 8, which builds upon previous Human Development courses. Development is viewed as occurring within a family and a culture, not in isolation. Emphasis is placed upon the connections between the theoretical and the practical.

## Prerequisites \& Notes

CDEV 248 and ELEC 306.
NOTE: Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 320 - Elementary Field Experience

Candidates enroll as part of the Professional Block in Elementary Education. This course involves an in-depth teaching experience in an elementary classroom in which opportunities are provided for the application of content knowledge, pedagogical skills, and the assessment of children's learning. Grading P/NC/Fail.

## Prerequisites \& Notes

Successful completion of block 2 in elementary education; Co-requisites: ELEC 332, 352, 372. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall

QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 324 - Methods for Teaching English as a Second Language and Bilingual Education

A course designed to acquaint the prospective teacher at any level with the methodology used to teach English to native speakers of other languages and to acquaint students with the specialized procedures used when teaching in bilingual classrooms (any two languages) on any level.

## Prerequisites \& Notes

One year of college language study or placement in 201. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 327 - Social/Cultural Studies in Early Childhood Education

This course is a multi-dimensional methods course which integrates background knowledge from the social sciences, natural sciences, and the humanities and fine arts. It focuses on an experiential approach to facilitating young children's growth and development, with an emphasis on human relationships. A multi-cultural perspective is fostered.

## Prerequisites \& Notes

ELEC 306 and 2.5 QPA. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 328 - Curriculum and Assessment in ESL Education

This course prepares students seeking Pennsylvania certification in English as a second language (K-12) with key concepts related to curriculum development and assessment for students learning English as a second language. Topics include meeting ESL curriculum standards, novel and accurate assessment procedures, culturally biased testing, assessment suitability criteria, and culturally appropriate testing situations. The course investigates assessment within the context of ESL curriculum design, implementation, and program evaluation. Finally, students will come to terms with the process of evaluating language minority students in relation to diagnosis, placement, formal and informal assessment, exiting, and monitoring of student progress.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 332 - The Teaching of Elementary Reading

Candidates will be introduced, through theory and practice, to a variety of strategies for teaching elementary reading. Candidates will become aware of ways to assess reading progress and ways to support children as they develop as readers. Candidates will also become familiar with materials used in the classroom to support literacy.

## Prerequisites \& Notes

ELEC 301, 342, 362; Co-requisites: ELEC 320, 352, 372. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 337 - Emerging Literacy

This course is a methods class, which provides a framework for understanding how to facilitate the development of young children's literacy. It includes a study of language development and its relationship to literacy; developmental reading and writing process; and an understanding of home, school, and societal environments that promote literacy in preschool through primary grades.

## Prerequisites \& Notes

ELEC 306 and 2.5 QPA. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 342 - The Teaching of Elementary Mathematics

The various processes and operations needed to effectively teach mathematics in the elementary school are carefully analyzed. Candidates recognize and can address the mathematical concepts and the potential misconceptions and misunderstandings of these concepts by school-aged children.

## Prerequisites \& Notes

MATH 210 and 310 or equivalent. Co-requisites: ELEC 301 and 362. Co- or pre-requisite SEFE 270. NOTE:
Admission to and retention in the teacher educaiton program are prerequisites for teacher education
coursework. Minimum overall QPA, preofesional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education handbook..

Credits: 3

## ELEC 347 - Modern Primary Programs

A survey of philosophy, techniques and methodology used in educating children through continuous progress in an ungraded primary school.

## Prerequisites \& Notes

ELEC 306 and 2.5 QPA.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 352 - The Teaching of Language Arts

Candidates will be introduced, through theory and practice, to a variety of strategies for teaching elementary language arts. They will become familiar with the six components of language arts: reading, writing, speaking, listening, visually representing, and viewing. Candidates will learn strategies for teaching these components and integrating them into the classroom curriculum. Candidates will also become familiar with assessment tools for language arts.

## Prerequisites \& Notes

ELEC 301, 342, 362.
NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

## Credits: 3

## ELEC 362 - The Teaching of Elementary Science

Candidates will learn numerous strategies which engage students in the science inquiry process by connecting scientific understanding and contemporary teaching and assessment practices. Locating and adapting appropriate activity-based science lessons are important components of this course.

## Prerequisites \& Notes

Two science courses, one with related laboratory; Co-requisites: ELEC 301, 342. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards.

## Credits: 3

## ELEC 372 - The Teaching of Elementary Social Studies

Candidates in this course will explore the social studies curriculum, including its organization; analyze methods of teaching, objectives, and materials: and discuss evaluation/assessment techniques. Study focuses on best practice classroom applications and the relationship between instruction and student learning outcome. Field experiences included.

## Prerequisites \& Notes

ELEC 301, 342, 362.
NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 382 - Literacy Assessment

A study of literacy assessment techniques designed to support the elementary teacher in designing a supportive literacy environment and effective literacy instruction for all students.

## Prerequisites \& Notes

ELEC 332. The Teaching of Elementary Reading. Note: Admission to and retention in the teacher education program
are prerequisites for teacher education coursework: Minimum over all QPA, professional dispositions, and major QPA prerequisites also apply. These are specified in the Teacher Eduation Policy Manual.

Credits: 3

## ELEC 385 - Creativity in Elementary School

An interdisciplinary approach to child-centered teaching through creative instructional materials, drama, music, and a variety of art media.

## Prerequisites \& Notes

CDEV 342.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 1 to 3

## ELEC 390 - Experimental Course

This course varies with program.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education

Credits: 0

## ELEC 397 - Early Childhood Education II

Curriculum, materials, audio-visual and other aids and their implementation in various early childhood learning situations with full articulation of such programs with the primary grades.

## Prerequisites \& Notes

ELEC 306.
NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

## Credits: 3

## ELEC 407 - Math and Science in Early Childhood Learning

Students will apply theories of child development to the implementation of math and science in the early childhood curriculum. Using a constructivist approach, students will plan and implement activities designed to enhance cognitive development in these areas. Students will become aware of available materials for teaching and assessment.

## Prerequisites \& Notes

ELEC 327, 337.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites apply. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 427 - Early Intervention

This course will examine atypical development from birth through age eight. Legal rights of children and families will be explored. Student will study the interventions necessary to assist the young child and their families adjust and adapt to development difficulties. A field component is included.

## Prerequisites \& Notes

ELEC 327, 337 and 2.5 QPA.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites apply. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 437 - Assessment in Early Childhood

This course is an overview of the role of assessment at the preschool and primary grade levels as integral to curriculum and instructional decision-making. Content will focus on informal assessment measures recommended for early childhood classroom teachers. A field experience gives students the opportunity to apply a variety of assessment measures with young children.

## Prerequisites \& Notes

ELEC 427, 447 and 2.5 QPA.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites apply. Details are available in the departmental office or from the student's advisor.

## Credits: 3

## ELEC 445 - Administration of Child Care Programs

Students are introduced in a practical manner to the procedures required to organize, license, and administer a child care program (including preschool and elementary aged children). This course involves a field experience of 5 hours.

## Prerequisites \& Notes

ELEC 327, 337 and 2.5 QPA.
NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 447 - Early Childhood Field Experience

This field-based course provides students with the opportunity to study and practice teaching in a preschool setting. As an early field experience, students are not expected to demonstrate the same competence as a student teacher. Graded P , NC, F.

Prerequisites \& Notes
ELEC 407, 427, 445.

Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply. Details are available in the departmental office or from the student's advisor.

Credits: 3

## ELEC 450 - Internship: Early Childhood

This course is a supervised off-campus, full-time work experience in a certified Early Childhood Education program. Students attend seminars and complete additional assignments made by supervisors. Open only to Elementary Education: Early Learning and Development students.

## Prerequisites \& Notes

ELEC 447.
Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 12

## ELEC 455 - Student Teaching: Elementary Education

Under the guidance of a cooperating teacher and university supervisor, students engage in two eight-week assignments on a full-time basis in specified school districts and attend scheduled seminars. Elementary Education student teachers will complete an action research study. Supervisors assign additional requirements.

## Prerequisites \& Notes

Must show evidence of taking all of the Praxis II tests PRIOR to Student Teaching

Credits: 12, 6, 3

## ELEC 456 - Student Teaching: Early Child

Under the guidance of a cooperating teacher and university supervisor, students engage in two eight-week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

## Prerequisites \& Notes

Must show evidence of taking all of the Praxis II tests PRIOR to Student Teaching

Credits: 12, 6, 3

## ELEC 490 - Independent Study

A program of independent work conducted by a student who has demonstrated academic proficiency, with prior approval of the student's advisor and departmental chairperson. Prerequisite: Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's
advisor.

Credits: 1 to 3

## ELEC 498 - Selected Topics

Experimental courses covering topics supplementary to teaching in the elementary school may be offered on an irregular basis with this course designation.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework. Minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply; these are specified in the Teacher Education Policy Manual. Details are available in the departmental office or from the student's advisor.

Credits: 1 to 3

## ENGL 099 - Connecting Reading and Writing

This course is designed to provide entering students with an introduction to college-level writing, reading, and thinking processes. It is a workshop style course connecting students to the various academic, social, and cultural contexts that inform their reading, writing, and thinking. Students are placed in the course after receiving an SAT Verbal score of 390 or below, an ACT Writing score of 13 or under, or an SAT Essay Writing Component score of 6 or under (based on scores of two readers). Students meeting one of those criteria may sit for an on-site timed essay during orientation for possible exemption from this course. Credit earned in this course will not count toward the university's 120 credit hour minimum required for graduation. Enrollment is continuous until students earn a "C" or better.

Credits: 3

## ENGL 101 - College Writing I

In this course, students will investigate the purposes, both academic and non-academic, for writing and reading. Students will develop increased writing fluency, clarity, and coherence; a fuller understanding of rhetorical principles, including invention, organization, and audience; improved strategies for revising and editing their prose, emphasizing the standards of edited American English; and an understanding of writing and reading as tools for learning and communication. Students are placed in this course after receiving an SAT Verbal score of 400 or above, an ACT Writing score of 14 or better, or SAT Essay Writing Component scores of 8 or 10 (based on scores of two readers). Students meeting one of those criteria may bring a writing sample and then sit for an on-site timed essay during orientation for possible exemption from this course. Students who receive an SAT Essay Writing Component score of 11 or 12 are automatically exempted from College Writing I. All students exempted from this course will receive 3 hours of credit towards the university's 120 credit hour minimum required for graduation.

Credits: 3

## ENGL 103 - College Writing II

In this course, students will learn to read academic and persuasive discourse in an active, critical manner; develop deliberated positions on selected issues and questions; compose strongly supported and reasoned arguments regarding those issues and questions; acquire information literacy skills, learning efficient and productive strategies for research from both print and online sources; and complete documented essays which effectively integrate source materials into a
persuasive whole.
Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 150 - Writing to Discover

An intensive writers' workshop where participants and facilitators work individually and in small groups to fine-tune the craft of their writing. Course may be repeated up to 4 credits.

Credits: 1

ENGL 204 - Composition and Rhetoric

Expository and persuasive writing based on the study and application of rhetorical theory.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 205 - Technical and Scientific Writing

Work in research and organizing professional papers and reports.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 210 - Interpreting Literature

Students read and interpret a variety of texts from any time period or geographical location. Genres may include poetry, short story, novella, novel, drama, and non-fiction.

## Prerequisites \& Notes

ENGL 101

Credits: 3

## ENGL 214 - Film Analysis

A survey of contemporary and classic films.

Credits: 3

ENGL 218 - Elementary College Latin

An introductory study of basic Latin. ENGL 218 may be taken for credit without ENGL 219.

Credits: 3

ENGL 219 - Elementary College Latin

An introductory study of basic Latin. ENGL 219 may be taken for credit without ENGL 218.

Credits: 0

## ENGL 220 - Writing About Literature

Writing as the practical application of literary interpretation and research, using recent computer technology.

## Prerequisites \& Notes

ENGL 101, 103

Credits: 3

## ENGL 240 - Creative Writing: Fiction

This writing workshop provides the opportunity for students to develop their abilities in writing fiction. Original student work is read and discussed in class and in conferences with the instructor. Reading of classic and contemporary fiction is assigned. This course may be repeated for up to six credits.

## Prerequisites \& Notes

ENGL 101

Credits: 3

## ENGL 242-Afro-American Literature

A study of black American literature as it pertains to the American experience.

Prerequisites \& Notes
ENGL 101 and 210 or English major status

Credits: 3

## ENGL 243 - Literature of the Women's Movement

Women authors from various periods read with a woman's perspective on the world. Prerequisite: ENGL 101 and 210 or English Major status.

## Prerequisites \& Notes

ENGL 101 and 210 or English Major Status

Credits: 3

ENGL 244 - Native American Literature

A study of Native American Literature as it pertains to the American experience.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 246 - Latino Literature of the U.S.

Study of U.S. Latino literature written in English. Focus will be on how region determines varying components (identity, theme, form, or mood), exemplified in distinctions between immigration, barrio, southwestern, Chicago, and L.A. literatures.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 248 - Eastern Literature

Study of such standard works as the Bhagavad-Gita, the writings of Confucius, and the Bible, in addition to other works from India, China, and the countries of the near East. Prerequisite: ENGL 101 and 210 or English Major status.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 249 - Life/Lit/Service

Life/Lit/Service will explore selected literary and linguistic concerns-e.g. representations of place, class, ethnicity and/or dialectal variation-through a service learning experience, in this case, an intensive week-long trip/service project at an off-campus location (e.g. San Francisco). This coursemay be repeated for up to three credits.

## Prerequisites \& Notes

Permission of instructor.

Credits: 3

## ENGL 288 - Classic Theatre Tour

The study of classic drama, climaxed by a trip to the Stratford Shakespeare Festival in Ontario, Canada; the Shaw Festival Theater; or other appropriate theaters in Toronto. Offered in the summer. Travel fee required.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status
Credits: 3

## ENGL 305 - Practicum: Teaching Writing

Experience in developing, responding to, evaluating, and grading student writing tasks, and in tutoring student writers, combined with an introduction to theory used in the teaching of writing. Required for certification to teach English in the secondary schools.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 306 - Advanced Technical and Scientific Writing

Advanced work in research and organizing professional papers and reports.

Prerequisites \& Notes
ENGL 205

Credits: 3

## ENGL 307 - Writing for Electronic Media and Film

This course develops writing skills that enable students to write basic continuity for public service announcements, slide-tape instructional programs, local level video tape productions, and other applications as they relate to electronic media and film.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 308 - Advertising Copywriting

Work in the writing and production of advertising copy.
Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 309 - Business and Administrative Writing

Principles and practices of good writing as found in business letters and report writing.

Prerequisites \& Notes
ENGL 101

Credits: 3
ENGL 310 - Auto/Biographical Writing

Biographical writing will acquaint students with historical, theoretical and practical problems involved in writing biography or autobiography. Students will write a paper on a theoretical aspect of biography and prepare a biographical or autobiographical project.

Prerequisites \& Notes
ENGL 103; some background in oral history would be useful

Credits: 3

## ENGL 311 - Chaucer

Selections from The Canterbury Tales, Troilus and Criseyde, and other works of Geoffrey Chaucer.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 312 - Shakespeare

Selected comedies, tragedies and histories with their literary and historical background.

Prerequisites \& Notes
ENGL 101 and 210 or English major status
Credits: 3

## ENGL 315 - The Cinematic Review: Historical and Critical Writing

A survey of significant motion pictures with emphasis upon the techniques of film making and film reviewing.

## Prerequisites \& Notes

ENGL 101

Credits: 3

## ENGL 316 - Asian Film

The critical analysis of films from India and East Asia. Emphasis is on contemporary films from China and Japan. Also meets requirements for the Asian Studies Minor.

Prerequisites \& Notes
ENGL 210 or declared English major

Credits: 3

## ENGL 317 - British Literature I

A comprehensive study of authors and literary works from the Old English period through Milton.

## Prerequisites \& Notes

ENGL 101

Credits: 3

## ENGL 318 - British Literature II

A comprehensive survey of authors and literary works from the Civil War and Restoration through the early 20th century.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 319 - American Literature I

A comprehensive survey of American literature from Puritan times through Melville.

Prerequisites \& Notes
ENGL 101 and 210 or English major status

Credits: 3

## ENGL 320 - American Literature II

A comprehensive survey of American literature from Whitman through modern times.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 331 - Historical Development of the English Language

An examination of each historical period to discover the structure of the language, its spelling, vocabulary, syntax, and the influences of social conditions upon it.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 332 - Traditional Grammar

Brief history of the English language; thorough study of traditional and transformational grammar with emphasis on syntax. Differences between prescriptive and descriptive grammar and problems of current usage.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 333 - Concepts in Linguistics

An examination of language structure: phonology, morphology, syntax and semantics, and an introduction to psycho, socio, and historical linguistics.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 336 - Second Language Acquisition

A course designed to acquaint the prospective teacher with theories of second language acquisition (SLA). SLA surveys the processes of acquiring/ learning language including the following issues: sound system-phonemic inventory; words-lexicon; semantics; syntax; critical period for second language learning; linguistic creativity, competence and performance.

Credits: 3

## ENGL 340 - Creative Writing: Poetry

This writing workshop provides the opportunity for students to develop their abilities in writing poetry. Original student work is read and discussed in class and in conferences with the instructor. Reading of classic and contemporary poetry is assigned. This course may be repeated for up to six credits.

Prerequisites \& Notes
ENGL 101

Credits: 3

## ENGL 383 - Challenges of the American Experience I (to 1865)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## ENGL 384 - Challenges of the American Experience II (1865 to th e Present)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## ENGL 389 - Stratford Shakespeare Tour

Study of the works and time of Shakespeare, climaxed by a trip to the Stratford Shakespeare Festival in Stratford, Ontario, Canada. Offered in the summer only. Travel fee required.

## Prerequisites \& Notes

ENGL 101 and 210 or English major status

Credits: 3

## ENGL 398 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## ENGL 402 - World Literature

Critical analysis of selected works by writers outside the U.S. and Britain.

## Prerequisites \& Notes

ENGL 101, 103 and 210 or English major status

Credits: 3

## ENGL 403 - Literary Criticism

Selected criticisms from Plato to Frye, with application of critical approaches and principles to works of several genres.

Prerequisites \& Notes
ENGL 101, 103 and 210 or English major status
Credits: 3

## ENGL 409 - Advanced Research Writing

Course will instruct majors in the B.S. in Writing Program (Option A) in the goals, audiences, sources, methods, and processes requisite for research and professionalization as writers.

Credits: 3

## ENGL 410 - Literature of the Environment

Encourage those interested in the rhetoric of science, nature writing, and environmentalism to pose informed questions regarding the language, rhetoric, images, and ideas found in significant poetry and prose, fiction and nonfiction, that concern the environment.

Prerequisites \& Notes
ENGL 101 and 210 or English major status

Credits: 3

## ENGL 450 - Internship

Provides work experience at an outside agency, such as newspapers, radio stations, industrial firms, government or social service, and the Pittsburgh Pirates and Pittsburgh Penguins public relations offices.

## Prerequisites \& Notes

At least two sequential courses in the writing sequence and approval of advisor

Credits: 3 to 6

## ENGL 480 - Literature Seminar

This seminar focuses on a major author or pair of authors, a single literary genre, or a specific literary period.

Prerequisites \& Notes
ENGL 101, 103 and 210 or English major status
Credits: 3

## ENGL 490 - Independent Study

A program of supervised independent study.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted
Credits: 1 to 3

## ENGL 491 - Independent Writing

Creative or expository writing projects.

## Prerequisites \& Notes

Dean's approval

Credits: 1 to 3

## ENGL 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## ENVS 440 - Science, Technology and the Environment

A scientific study of interactions of global systems in the geosphere and biosphere. Selected global problems, such as waste production and disposal, energy use, atmospheric warming, ozone depletion, and acid deposition are analyzed along with possible alternatives.

## Prerequisites \& Notes

Four courses completed in the natural sciences and mathematics area of the liberal studies program
Credits: 3

ENVS 450 - Environmental Science Internship

Academic credit may be earned through a practicum experience, working for an agency or business.

## Prerequisites \& Notes

A minimum of 16 credits completed in the major and approval of the agency or business, the program director and the advisor

Credits: 3 to 12

## ENVS 480 - Environmental Systems Analysis

The student will investigate an environmental problem in conjunction with an appropriate faculty member as a research project.

## Prerequisites \& Notes

A minimum of 16 credits completed in the major and the approval of the program director and the advisor

Credits: 3

## ERS 100 - Introduction to Exercise Science: Careers and Content

An introductory level class for exercise science majors in which the student will trace the origin of the profession and be given the opportunity to identify professional characteristics through observation and interaction with professionals in the field. The class will encompass career planning, internship opportunities, and current research that pervades the profession.

Credits: 3

## ERS 107 - Introduction to Athletic Training

Addresses the historical development of athletic training and the scope of present programs, including personnel, space and equipment, necessary supplies, conditioning, pharmacology, classification of sports injuries and tissue response to injuries.

Credits: 3

## ERS 161 - Adapted Physical Education Activity

This course meets the needs of students with disabilities and/or other health impairments who are otherwise unable to participate in the traditional physical education activity courses. Throughout the course the students will determine individual goals and limitations related to physical performance. In a highly structured and monitored program of exercise and activity coupled with lecture materials, the students will understand physical and motor fitness parameters related to their unique situation.

Credits: 1

## ERS 165 - Introduction to Equine Facilitated Riding

Designed to introduce the concept of therapeutic horseback riding as a treatment modality for existing impairments in the individual as an intervention technique against the continued deterioration of those existing impairments. The equine facilitated therapeutic riding program will be examined on an in-depth level in regard to structure, function, operational procedures, and management. Additional areas of focus will include the study of disabling condition, the
study of intervention for people with disabilities through a riding program and the experience of the therapeutic movement of the horse.

Credits: 3

## ERS 217 - Care and Prevention of Athletic Injuries

Studies and applies principles and techniques used in prevention, care and rehabilitation of athletic injuries. Clinical experience required

Credits: 3

## ERS 261 - Adapted Aquatics

Provides the student with practical experience, lectures and discussion in working with children and adults with disabilities in an aquatic setting.

Credits: 3

## ERS 264 - Applied Anatomy

A study of the structure of the human body with particular emphasis upon the skeletal, muscular, nervous and cardiovascular systems as related to scientifically sound and practical exercise programs.

Credits: 3

## ERS 265 - Sport and Disability

Provides practical opportunities to participate in and understand sport opportunities for individuals with disabilities.

Credits: 3

## ERS 273 - Measurement and Statistical Application in Exercise Science

Focuses on measurement, data collection, and statistical treatment (descriptive and inferential) of health and fitness data associated with exercise science.

Credits: 3

## ERS 275 - Introduction to Adapted Physical Activity

The acquisition of competencies to implement developmental programs for individualized instruction where an individual's progress can be measured and monitored through extending instructional objectives in physical, social, perceptual, and skill activities. The course emphasizes the inclusion of children and adults with disabilities in the educational, recreational, and physical fitness process and placement in the least restrictive environment in schools and community programs.

Prerequisites \& Notes
ERS 264

Credits: 3

## ERS 277 - Integrative Approach to Athletic Training

Integrate cognitive concepts into progressively higher functional and practical application. This integration is to be achieved after completion of selected athletic training classes and by direct supervision and mentoring.

Prerequisites \& Notes
Admission into the athletic training program
Credits: 3

## ERS 285 - Adapted and Therapeutic Exercise

Provides the student with practical experience in assessment of assigned clients with disabilities, program design, and administration of exercises performed in an aquatic setting.

## Prerequisites \& Notes

ERS 264 or permission of the instructor

Credits: 3

## ERS 317 - Therapeutic Modalities Theory

Familiarizes the athletic training student with contemporary physical modalities, appropriate physiology, indications, contraindications, and methods of application.

Prerequisites \& Notes
Admission into the athletic training program

Credits: 3

## ERS 321 - Care and Prevention of Injuries of the Physically Active

Studies and applies principles and techniques used in prevention, care, and rehabilitation of fitness related injuries.

Prerequisites \& Notes
HSAF 205 and ERS 264

Credits: 3

## ERS 327 - Therapeutic Modalities Procedures

Familiarizes the athletic training student with the appropriate application and maintenance of therapeutic modalities. To be taken concurrently with ERS 317.

Prerequisites \& Notes
Admission into the athletic training program
Credits: 3

## ERS 337 - Physical Examination of the Athlete

Presents knowledge and skills for orthopedic evaluation of the spine and extremities. Includes evaluation of the internal organs as well.

## Prerequisites \& Notes

ERS 264 or permission of the instructor, and admission into the athletic training program

Credits: 3

## ERS 347 - Theory of Therapeutic Techniques in Rehabilitation

Presents treatment theories and techniques necessary in the planning and implementation of therapeutic exercise for prevention of athletic injuries and/or care of the athlete.

## Prerequisites \& Notes

Admission into the athletic training program

Credits: 3

## ERS 351 - Biomechanics

A study of analysis of human motion based on anatomic, physiologic and mechanical principles. Laboratory included.

Prerequisites \& Notes
ERS 264 and PHYS 201

Credits: 3

## ERS 357 - Application of Therapeutic Techniques

Enables students to develop the application of therapeutic techniques for the prevention of injury and/or care of the athlete. To be taken concurrently with ERS 347.

Credits: 3

## ERS 358 - Assessment Techniques in Adapted Physical Activity

Focuses on assessment and intervention for individuals with disabilities. Special emphasis will be on linking assessment to intervention and functioning as a member of an interdisciplinary team. Assessment includes testing, interpreting, prescribing, implementing, and evaluating. Included are programs for physical and motor fitness, posture, and perceptual-motor skills for people with disabilities. The course will also include discussions of exemplary programs and implications of Federal and state legislation concerning individuals with disabilities.

Credits: 3

## ERS 363 - Biomechanics of Special Populations

A study of human movement patterns with emphasis on the development of efficient movement for special populations. Efficient movement patterns will be based on anatomical, mechanical, and physiological principles.

Credits: 3

## ERS 368 - Achievement Based Curriculum

A review of best practices and approaches to planning, assessing, prescribing, teaching, evaluating, and modifying adapted physical activity programs through the use of a systematic achievement based model.

Credits: 3

## ERS 370 - Anatomical and Physiological Bases of Physical Activity

This course is designed to provide the basic anatomical and physiological principles that have direct appliation to physical activity programming in the K-12 school setting. Weekly laboratory sessions will provide practical application experiences to illustrate the theoretical knowledge base.

Credits: 3

## ERS 374 - Stress Management

This course provides a comprehensive view of stress and stress management. The theories of stress, the psychophysiology of stress, the realtion of stress to the different dimensions of wellness, the assessment of stress, and prevention and intervention techniques will be covered. A physical activity component will be included focusing on stress reduction techniques.

Credits: 3

## ERS 375 - Exercise Physiology I

Study of the physiological bases of exercise with emphasis on the responses and adaptations of the systems of the body to a variety of exercise stimuli. Exercise physiology principles are studied by means of participation in weekly laboratory experiences.

Prerequisites \& Notes
ERS 264

Credits: 3

## ERS 376 - Exercise Leadership: Group Fitness

This course is designed to provide specialized instruction and opportunities for practical application in the following areas of group fitness activities: hi/lo impact, step, slide, water aerobics, resistance training, yogaerobics, funk/hip-hop, cardio kick box, interval and circuit training. Each topic will be covered in detail with respect to physiological and biomechanical principles, choreography, safety, and modifications for participation of special populations. Current trends and research in the area of group fitness instruction will be explored.

## Prerequisites \& Notes

ERS 375

Credits: 3

## ERS 377 - Exercise Leadership: Strength Fitness

Designed to provide both the theoretical and practical knowledge to effectively design, organize and conduct strength fitness programs. Specific emphasis will be placed on the physiological/kinesiological principles, training guidelines and safety procedures in developing and administering programs for general strength fitness, competitive weightlifting and bodybuilding.

## Prerequisites \& Notes

ERS 375

Credits: 3

## ERS 384 - Motor Control and Learning

Highlights selected motor learning theorists, basic principles surrounding sensory and motor systems, motor control, and other conditions influencing motor skills acquisition in physical education and athletics. Practical laboratory experiments will be utilized to illustrate basic concepts of skill learning and performance.

Credits: 3

## ERS 387 - Practicum in Athletic Training

Provides educational experiences/assessments in the area of athletic training psychomotor domain, to be coordinated/supervised/mentored in a varied athletic training practicum (totaling a minimum of 1,000 hours). Students will establish/maintain portfolios, develop proper medical documentation and record keeping skills, and be provided opportunities for orthopedic surgery observation.

## Prerequisites \& Notes

Admission into the athletic training program

Credits: 3

## ERS 407 - Advanced Studies in Current Strategies in Athletic Training

Surveys topics relevant to athletic training, depending on availability of health management experts.

## Prerequisites \& Notes

Must have senior status in the athletic training program and have completed all other athletic training coursework.

Credits: 3

## ERS 427 - Mastery in Athletic Training

A capstone course that allows the student to synthesize and apply knowledge and skills of an entry-level athletic trainer in a comprehensive manner.

## Prerequisites \& Notes

Completion of 9 credits of ERS 387

Credits: 3

## ERS 450 - Exercise Science Internship

This course is designed to provide students an opportunity to apply Exercise Science career-oriented skills in a supervised work experience in a university approved fitness, wellness or rehabilitative agency.

## Prerequisites \& Notes

Completion of internship application process and valid CPR certification

Credits: 12

## ERS 452 - Intern-Adapted Physical Activity Program

This course is designed to provide students an opportunity to apply Adapted Physical Activity practical skills in a setting serving individuals with disabilities in exercise, physical education, recreation, or sport.

Credits: 3

## ERS 465 - Program Design in Adapted Physical Activity

Develops competencies in the implementation of developmentally appropriate activities for children and adults with disabilities in the school and through transitional programs conducted within the community.

## Prerequisites \& Notes

ERS 365 or permission of the instructor

Credits: 3

## ERS 466 - Professional Affiliation in Adapted Physical Activity

Designed to actively involve the learner in an advanced study of adapted physical activity. The course is conducted in seminar format and the students will study the application of the principles, methods, organization and administration of individualized motor programs.

## Prerequisites \& Notes

ERS 275 or permission of the instructor

Credits: 3

## ERS 474 - Physical Fitness Assessment and Instrumentation

Provides the theoretical and practical basis to select and utilize properly the instrumentation and techniques for physical fitness assessment.

Prerequisites \& Notes
ERS 273, 375

Credits: 3

## ERS 475 - Exercise Physiology II

This is a laboratory-based course that focuses on cardiovascular and respiratory responses and adaptations to a variety of exercise stimuli in both healthy individuals and those with various cardiopulmonary diseases. Special emphasis will be placed upon electrocardiogram monitoring and interpretation, graded exercise testing, and the influence of various
environmental factors upon cardiac and pulmonary function.

## Prerequisites \& Notes

ERS 375, 474 and Biol 216 or permission of the instructor

Credits: 3

## ERS 476 - Physiological Aspects of Aging and Human Performance

A study of the physiological aspects of the aging process with emphasis on the effects of physical activity on health in the later years of life and on the degenerative process of aging. The course will stress the physiological responses to aging that are influenced by exercise and the physiological rationale for lifelong physical activity.

Credits: 3

## ERS 484 - Exercise Prescription

This course provides the theoretical knowledge base to design safe and effective personalized exercise programs for various populations. Emphasis is placed upon prescribing individualized cardiovascular, musculoskeletal and weight control programs for the apparently healthy, the chronically diseased, the elderly, children and pregnant females.

Prerequisites \& Notes
ERS 474

Credits: 3

## ERS 493 - Exercise Science: Senior Synthesis

Designed to provide students with experiences which allow them to apply their knowledge and skills in a practical worksite situation.

## Prerequisites \& Notes

ERS 474

Credits: 3

## ERS 561 - Worksite Wellness Promotion

This course is designed to provide current information in the area of wellness and health promotion in various workplace settings. An overview of various concepts and issues relating to worksite wellness programs will be discussed. Guidelines for planning, implementing, and evaluating successful programs will be analyzed.

Credits: 3

## ESL 101 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as MODL 101.

Credits: 3

## ESL 102 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as MODL 102.

Credits: 0

## ESL 103 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as MODL 103.

Credits: 0

## FIN 100 - Personal Finance Planning

Practical money management including information about careers, how to get a job, budgeting, credit, investments, insurance, housing, taxes, and other consumer matters.

Credits: 3

## FIN 211 - Real Estate Fundamentals

The study of nature and scope of real estate, factors affecting demand and supply, property rights, title, deeds and title closing, sources of financing, real estate valuation, taxes, leveraged buy-outs, and real estate investment decision.

Credits: 3

## FIN 304 - Money and Banking

Emphasis is upon monetary policy, how it is implemented, the theories on which it is based, and the implication of this policy on our economy.

Prerequisites \& Notes
ECON 201

Credits: 3

## FIN 318 - Intermedicate Statistcal Analysis

Statistical analysis encompassing multiple regression and correlation, ANOVA (simple and multivariate), goodness of fit, statistical decision analysis, and advanced forecasting techniques.

## Prerequisites \& Notes

ECON 219 or MGMT 219, or permission of the instructor
Credits: 3

## FIN 320 - Managerial Finance

Capital budgeting, cost of capital, management of short and long term assets, mergers and financial reorganization.

## Prerequisites \& Notes

ACCT 210, Advanced business standing

Credits: 3

## FIN 321 - Investments

Introduction to security markets and their operation; investment alternatives; fundamentals of investment analysis.

## Prerequisites \& Notes

FIN 320 or permission of the instructor

Credits: 3

## FIN 322 - Bank Financial Management

Principles of bank financial management including sources and uses of funds and the role of the bank in financial markets.

## Prerequisites \& Notes

F(IN 320 or permission of the instructor

Credits: 3

## FIN 323 - Financial Markets and Institutions

Introduction to financial markets and institutions and to their role in financing business, consumers and government.
Prerequisites \& Notes
FIN 320 or permission of the instructor
Credits: 3

FIN 327 - Management of Working Capital

In-depth analysis of financial management of business firms with special emphasis on the management of working capital.

Prerequisites \& Notes
FIN 320

Credits: 3

## FIN 328 - Long TermFinancial Management

This course will examine such topics as capital budgeting under certainty, uncertainty and inflationary conditions, lease/buy decisions, capital structure theory, dividend policy and the value of the firm, sources of long-term financing
and financing with options.

## Prerequisites \& Notes

FIN 320

Credits: 3

## FIN 329 - Principles of Insurance

A study of the basic principles of insurance and risk. Topics include property and liability insurance; the financial structure and organization of insurance business, and the different fields of insurance.

## Prerequisites \& Notes

FIN 320

Credits: 3

## FIN 340 - Real Estate Investment

The study of the nature and scope of real estate investment, investment decision process and investment strategy, financial and risk analysis, tax implications, institutional real estate investment and real estate investment trust funds.

## Prerequisites \& Notes

FIN 320

Credits: 3

## FIN 409 - Retirement and Estate Planning

In-depth study of the tools and techniques available for use in retirement and estate planning from a personal financial planning perspective. Particular emphasis will be given to retirement cash flow analysis and planning as well as the transfer tax system inherent in estate planning and the methods available for estate management.

Prerequisites \& Notes
FIN 321, FIN 329, ACCT 240, ACCT 308 or permission of the instructor

Credits: 3

## FIN 410 - Personal Financial Planning Seminar

Synthesize the topics requisite to expertise in personal financial planning as explored principally through case studies. These topics include risk management, investment, insurance and tax planning, and retirement and estate planning.

## Prerequisites \& Notes

FIN 321, FIN 329, FIN 409, ACCT 240, ACCT 308 or permission of the instructor

Credits: 3

FIN 420 - Finance Seminar

Capital budgeting, cost of capital, capital structure, working capital management and long-term financing.
Prerequisites \& Notes
FIN 320 or permission of the instructor

Credits: 3

## FIN 421 - Portfolio Theory

Advanced treatment of investment concepts. In-depth analysis of Modern Portfolio Theory, Capital Asset Pricing Model (CAPM) and its extensions, options, interest options, future markets and precious metals.

Prerequisites \& Notes
FIN 321

Credits: 3

## FIN 427 - International Financial Management

International monetary systems, sources of funds, import and export financing; taxation of multinational corporations, foreign investment decisions; political risk; risk of foreign exchange losses; management of working capital.

Prerequisites \& Notes
FIN 320

Credits: 3

## FIN 430 - International Banking

Internationalization of U.S. and foreign banks to meet the global financial needs of multi-national activities.

## Prerequisites \& Notes

FIN 320, FIN 323 is recommended

Credits: 3

## FIN 450 - Internship

Supervised placement and research in selected public and private agencies at appropriate institutions.

## Prerequisites \& Notes

Application and permission of the instructor

Credits: 3 to 12

## FIN 490 - Independent Study

In-depth reading and/or research in an area of particular interest to the student, done with the guidance of a faculty member.

Prerequisites \& Notes

12 credits of major courses, application, permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## FREN 101 - French Language and Culture I

A broad and practical working foundation in the language

Credits: 3

## FREN 102 - French Language and Culture II

A broad and practical working foundation in the language.

## Prerequisites \& Notes

FREN 101 or the equivalent.

Credits: 0

## FREN 103 - French Language and Culture III

A broad and practical working foundation in the language.

Prerequisites \& Notes
FREN 102 or the equivalent

Credits: 0

## FREN 201 - Communicating in French

A functional course in speaking and writing French, stressing everyday vocabulary and structure.

Prerequisites \& Notes
FREN 103 or the equivalent

Credits: 3

## FREN 210 - French Lliterature in Translation

A study of representative French literary works, emphasizing the persons and ideas which have influenced French and foreign literatures. The course will be given in English; no knowledge of French required. For non-French majors.

Credits: 3

## FREN 220 - Reading in French

An introduction to reading in French at the intermediate level.

Prerequisites \& Notes
FREN 103 or the equivalent

Credits: 3

## FREN 300 - French Grammar Review

An intermediate grammar review course emphasizing the basic structure of French.

## Prerequisites \& Notes

FREN 201 or 220 or the equivalent

Credits: 3

## FREN 301 - Developing French Vocabulary \& Conversation Skills

Development of French vocabulary and conversation skills through intensive study of selected theme areas.

Prerequisites \& Notes
FREN 201, 220 or permission of the instructor

Credits: 3

## FREN 303 - Business French

An introduction to basic French language usage in commerce and commercial correspondence.

## Prerequisites \& Notes

FREN 201 or 220 or the equivalent

Credits: 3

## FREN 305 - French Civilization

An advanced course in the study of the development of French civilization from the earliest times to the end of the 19th century.

Prerequisites \& Notes
FREN 201 or 220 or the equivalent

Credits: 3

## FREN 306 - Modern France

A study of contemporary French life and attitudes today.
Prerequisites \& Notes
FREN 201 or 220 or the equivalent

Credits: 3

FREN 320 - Main Currents in French Literature

An introduction to the study of French literature through prose, drama and poetry.

## Prerequisites \& Notes

FREN 201 or 220 or the equivalent

Credits: 3

## FREN 335 - Women in French Literature

A study of French women authors and of French women as literary characters in French literature.

Prerequisites \& Notes
FREN 201 or 220 or the equivalent

Credits: 3

## FREN 350 - French Linguistics and Phonetics

An introduction to general linguistics and the practical application of phonetics to the study of French. Analysis and practice of the sound system of the foreign language.

Prerequisites \& Notes
Six credits at the 200 or above level

Credits: 3

## FREN 395 - Workshop

Special topics of interest to undergraduates and selected community members.

Credits: 3

## FREN 400 - Advanced French Grammar

An advanced course in the study of French grammar and usage.

## Prerequisites \& Notes

FREN 300

Credits: 3

## FREN 401 - Advanced Oral Communication Skills

This course will provide the opportunity for advanced students to improve their aural comprehension and their conversation abilities in French.

## Prerequisites \& Notes

Six credits of French at the 300 level

Credits: 3

## FREN 402 - Eighteenth-Century Novel

A study of the Age of Enlightenment as reflected in the novel.

## Prerequisites \& Notes

Six credits of French at the 300 level

Credits: 3

## FREN 403 - Nineteenth-Century French Literature

Readings from the romantic, realistic and naturalistic movements.

## Prerequisites \& Notes

Six credits of French at the 300 level

Credits: 3

## FREN 404 - Modern French Literature

A study of various aspects of modern French literature.

## Prerequisites \& Notes

Six credits of French at the 300 level

Credits: 3

## FREN 411 - Literature of the Classical Period

A study of French Classicism, emphasizing the plays of Corneille, Moliere and Racine.

Prerequisites \& Notes
Six credits of French at the 300 level

Credits: 3

## FREN 490 - Independent Study

Students have an opportunity to study selected areas in greater concentration. Prerequisite: Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## G\&ES 100 - Discover Geography

An introductory course that surveys the field of geography and demonstrates the relevance of basic geographic concepts and methodologies.

Credits: 3

## G\&ES 105 - World Regional Geography

This course will provide an introduction to the regional concept, classification of major culture regions throughout the world and a description of the physiocultural character of those regions. A major emphasis of this course is learning where places are in a regional context.

Credits: 3

## G\&ES 107 - Environments and Peoples of the Developed World

An introductory course that surveys the developed world, stressing the economic, social, political, and environmental characteristics of US and Canada, Europe, the Russian Republics, and Japan.

Credits: 3

## G\&ES 109 - Environments and Peoples of the Developing World

An introductory course that surveys the developing world, stressing the economic, social, political, and environmental characteristics of Latin America, Africa, and Asia.

Credits: 3

## G\&ES 115-Map Reading and Interpretation

Provides fundamental map concepts with an emphasis on using and understanding an atlas, making and interpreting computer maps, and reading and interpreting topographic maps.

Credits: 1

## G\&ES 135 - Introduction to Environmental Problems

An introduction to some of the more crucial environmental problems and alternative solutions that are available.

Credits: 3

## G\&ES 150 - The Natural Environment

An introduction to interrelationships among the physical elements of the environment, including the study of weather, climates, vegetation, soils and landforms.

Credits: 3

## G\&ES 201 - Latin America and the Caribbean

Consideration is given to physical, historical, cultural, political, and economic patterns in Latin America and the Caribbean.

Credits: 3

G\&ES 202-United States and Canada

An introductory course that surveys the patterns, connections, and evolution of environments, cultures, and economies of the U.S. and Canada, with an emphasis on maps, regions, and images.

Credits: 3

## G\&ES 204 - Post-Soviet Union

Study of the Soviet Union and Soviet-bloc nations with emphasis on economic, physical, political, and cultural aspects.

Credits: 3

## G\&ES 215 - Rural and Urban Planning

An introduction to social and physical planning for rural areas, towns and cities. Cross-listed with PUBA 215.

Credits: 3

## G\&ES 220-General Methods of Fieldwork

A survey of methodology commonly employed for field research, including techniques of field observation, the use of field equipment, field mapping procedures, and the identification and tabulation of primary field data.

Prerequisites \& Notes
G\&ES 115

Credits: 3

## G\&ES 235 - Conservation

An examination of the earth's complex resource base which places special emphasis on the geographic location of resources and on conservation/preservation practices.

## Prerequisites \& Notes

G\&ES 135 or permission of the instructor

Credits: 3

## G\&ES 242-Geography of Religion

The distribution and arrangement of world religions, giving consideration to the comparative influence of religion on the cultural landscape and on regional development.

Credits: 3

## G\&ES 244 - Environmental Justice

An examination of basic factors underlying the spatial allocation and development of resources.

Credits: 3

## G\&ES 245 - Population and Resources

Basic demographic principles and their relationship to regional development.

Credits: 3

## G\&ES 255-General Climatology

The systematic analysis of the earth's climates, including their description, classification, and location.

## Prerequisites \& Notes

G\&ES 150 or permission of the instructor

Credits: 3

## G\&ES 301-Geography of Rural Areas

Analyzes the structure and primary functional patterns of rural areas, with an emphasis on agricultural and industrial land use, problems of rural development, and population shifts.

Credits: 3

## G\&ES 302-Cultural Geography

This course explores basic environmental and spatial approaches in the field of cultural geography. These approaches include cultural ecology, cultural history, cultural diffusion, cultural region, cultural integration and symbolism, and the cultural landscape.

Credits: 3

## G\&ES 303-Asia

A survey of the major regions of Asia emphasizing their physical, cultural, and political characteristics. Several countries are selected for special emphasis.

Credits: 3

## G\&ES 308 - Europe

The evolution of nations, the cultural landscape, and the spatial-economic organization of Europe.

Credits: 3

## G\&ES 309-Africa

This course surveys the patterns, connections, and evolution of environments, cultures, nations, and economies of Africa, with an emphasis on maps, regions, and images.

Credits: 3

## G\&ES 310 - Urban Geography

The course is designed to provide insights into the nature of cities and smaller urban places.

Credits: 3

## G\&ES 315-Cartography I

Basic elements of computer-assisted thematic map design are discussed. Cartographic projects serve as a means of applying major concepts such as map projections, data classification, color theory, and qualitative/quantitative symbology. Includes a lab.

Prerequisites \& Notes
G\&ES 115

Credits: 3

## G\&ES 324 - Environmental Law and Policy

The study of political control of the environment. Focus on the roles played by individuals and groups. Cross-listed with POLS 324.

Credits: 3

## G\&ES 325 - Introduction to Geographic Information Systems

This course introduces students to integrated computer tools for the capture, storage, manipulation, analysis, and printout of earth-referenced data. Computers are used to store maps, analyze maps, and produce new maps along with their attributes to address societal issues. Includes a lab.

Prerequisites \& Notes
G\&ES 115

Credits: 3

## G\&ES 330 - Political Geography

The effects of politics on geography and the effects of geographic factors on politics.

Credits: 3

## G\&ES 331 - Economic Geography

Examines human use and economic organization of the earth.

Credits: 3

G\&ES 345-Population Analysis

A study of the techniques of population analysis with respect to growth, distribution, fertility, migration, and other demographic characteristics.

## Prerequisites \& Notes

Some background in algebra or statistics

Credits: 3

## G\&ES 375-Geography of Intolerance

Analyzes cross-culturally the impact on resource allocation and the spatial implications of gender, racial, religious, political and class discrimination.

Credits: 3

## G\&ES 410 - Remote Sensing

Covers the electromagnetic and thermal properties of earth objects, principles and operations of sensors, and the practical applications of remote sensing. Lectures will be supplemented with exercises requiring computer processing of satellite data.

Credits: 3

## G\&ES 415 - Cartography II

Advanced issues and theory of cartographic design are discussed. Cartographic applications include flow maps, bivariate statistical mapping, cartograms, interactive maps, and map animation. Includes a lab.

## Prerequisites \& Notes

G\&ES 315 or permission of the instructor

Credits: 3

## G\&ES 420 - Historical Geography of Anglo-America

A study of settlement patterns, land utilization, and sequent occupancies for selected periods since 1500 . A student is expected to have background in geography and American history.

Credits: 3

## G\&ES 425-Advanced Geographic Information Systems

This course investigates and applies advanced Geographic Information Systems (GIS) techniques. Students will learn current techniques for the collection, evaluation, input, analysis, and output of spatial data with various GIS tools. Students will apply these techniques to real world problems in areas such as environmental monitoring, environ-mental modeling, urban planning, and economic location. Includes a lab.

## Prerequisites \& Notes

G\&ES 315, 325

Credits: 3

## G\&ES 435 - Preservation Planning

A study of the American preservation movement as it relates to features of the cultural landscape. The origin and diffusion of building styles and the methods and problems associated with their preservation are emphasized.

Credits: 3

## G\&ES 444 - Philosophy of Geography

Acquaints the student with traditional and current geographic literature and traces the development of geographic methodology in the United States during the twentieth century.

## Prerequisites \& Notes

Junior standing and/or permission of the instructor

Credits: 3

## G\&ES 445-Regional Planning

Deals with planning for the future of regions that are larger than any single local government. Consideration is given to economic development, land use, transportation, and other regional planning concerns. Cross-listed with PUBA 445.

## Prerequisites \& Notes

G\&ES/PUBA 215

Credits: 3

## G\&ES 450 - Internship

Supervised placement and field experience in a selected public or private agency.
Prerequisites \& Notes
Permission of the instructor

Credits: Variable

## G\&ES 489 - Field Studies

Students use the scientific method in selecting a topic, collecting data in the field, analyzing these data, and preparing a formal paper.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## G\&ES 498 - Selected Topics

The in-depth examination of a specific topic. The topic selected and its treatment depend on the instructor.

## GERM 101 - German Language and Culture I

A broad and practical working foundation in the language.

Credits: 3

## GERM 102-German Language and Culture II

A broad and practical working foundation in the language.
Prerequisites \& Notes
GERM 101 or the equivalent
Credits: 0

## GERM 103 - German Language and Culture III

A broad and practical working foundation in the language.

Prerequisites \& Notes
GERM 102 or the equivalent

Credits: 0

## GERM 201 - Communication in German

A functional course in speaking and writing German, stressing everyday vocabulary and structure.

Prerequisites \& Notes
GERM 103 or the equivalent

Credits: 3

## GERM 210-German Literature in Translation

A study of representative German literary works, emphasizing the persons and ideas which have influenced German foreign literatures. The course will be given in English; no knowledge of German required. For non-German majors.

Credits: 3

## GERM 220 - Reading in German

An introduction reading in German at the intermediate level.
Prerequisites \& Notes
GERM 103 or the equivalent
Credits: 3

## GERM 300 - German Grammar Review

An intermediate grammar review course, emphasizing the basic structure of German.

## Prerequisites \& Notes

GERM 201 or 220 or the equivalent

Credits: 3

## GERM 303 - Business German

A study of the German language as related to business and commerce. A consideration of the form and language of the business letter in German.

## Prerequisites \& Notes

GERM 201 or 220 or the equivalent

Credits: 3

## GERM 305 - German Civilization

A study of the development of German civilization from its earliest beginnings to its modern times. Course is for majors and non-majors.

Prerequisites \& Notes
GERM 201 or 220 or the equivalent
Credits: 3

## GERM 306 - Modern German Civilization

A study of the civilization of German-speaking areas in the twentieth century.

## Prerequisites \& Notes

GERM 201 or 220 or the equivalent

Credits: 3

## GERO 265 - Aging and the Older Person

Introduction to the interdisciplinary study of gerontology as a social, behavioral and biological science. A prerequisite to courses in gerontology and aging. Women and Aging examines the effects of women growing older in a changing society. Social, psychological, physical, economic, cultural, and political implications will be discussed, including health concerns, changing roles, and discrimination.

Credits: 3

## GERO 425 - Women and Aging

Examines the effects of women growing older in a changing society. Social, psychological, physical, economic, cultural, and political implications will be discussed, including health concerns, changing roles, and discrimination.

Credits: 3

## GERO 450-Gerontology Internship

Individually designed experiential learning intended to provide the student with an opportunity for observation and participation in a wide range of gerontological activities in an approved institution or agency setting.

## Prerequisites \& Notes

Nine credits of approved gerontology coursework or permission of the gerontology coordinator

Credits: 3 to 12

## GERO 465 - Seminar in Gerontology

An interdisciplinary investigation of selected facets of gerontology. Course content is drawn from the biological, behavioral, and social sciences, and it will include a consideration of current issues in such areas as mental health, housing, economics, transportation, preventive health program, long-term care, and leisure work activities.

## Prerequisites \& Notes

GERO 265 or quivalent work experience; additional coursework in gerontology is desirable

Credits: 3

## GERO 490 - Independent Study

A rigorous investigation of a topic of relevance to gerontology not covered in detail in existing courses.

## Prerequisites \& Notes

Permission of gerontology coordinator, instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## HIST 151 - Ancient and Medieval World

Major civilizations of the Western world as they meet and interact with the East. Emphasis is upon cultural achievements and institutional development to 1650 .

Credits: 3

## HIST 152 - Rise of the Modern World

European peoples and nations from the Renaissance and Reformation to the French Revolution and the Napoleonic Wars.

Credits: 3

## HIST 153 - Twentieth Century World

Contemporary history in the perspective of World War I and II, the Great Depression and the challenge of totalitarianism to democracy; Lenin vs. Wilson; Mussolini, Franco, Hitler and Tojo vs. Churchill and Roosevelt; Stalin and Mao Tse-tung.

Credits: 3

## HIST 201 - Colonial America to 1825

The colonies, the American Revolution, the new nation and Jeffersonian democracy to the Jacksonian period, including some study of ethnic groups.

Credits: 3

HIST 202 - United States, 1825-1900

Jacksonian era to world power, including sectionalism, manifest destiny, Civil War and Reconstruction and problems of industrialization.

Credits: 3

## HIST 203 - U.S. History Since 1900

Social, economic and political history of the 20th century, including World War I, and the twenties, the New Deal, World War II, postwar problems and the African American's struggle for acceptance.

Credits: 3

## HIST 205 - Historians Craft

The course will introduce students to the skills associated with historical research and writing by means of word processing. In addition, various schools of historical thought will be analyzed.

Credits: 3

## HIST 233 - African American History to 1876

To investigate, discuss, and debate the historical experience of African Americans from their origins in West Africa, through the Middle Passage and the Plantation, to the 15th Amendment and the Sell-Out of 1876.

Credits: 3

## HIST 234 - African American History Since 1876

The historical experiences of African Americans from the collapse of the Reconstruction and the emergence of Booker T. Washington, through the NAACP, UNIA, and the Harlem Renaissance, to the rise of the Nation of Islam, CORE, SCLC, and the election of 1976.

Credits: 3

## HIST 237 - Outstanding Americans

A biographical approach to the study of American history. A study is made of the lives of those Americans who have made a contribution to society outside of politics.

Credits: 3

## HIST 240 - Warfare in the Twentieth Century

A survey of wars in this century with emphasis on World Wars I and II. Technical innovation, military theory, and strategy will be examined along with their relationship to the nations involved.

Credits: 3

## HIST 286 - Modern Japan

This course will investigate the history of the Japanese people from the beginning of the nineteenth century to the present and explore Japan's increasingly important role in the modern world.

Credits: 3

## HIST 305 - Russia to 1855

A social, political and cultural history from ancient times to the death of Nicholas I.

Credits: 3

## HIST 306 - Russia Since 1855

Continuity and change in Russia from the reign of Alexander II through the Soviet period.
Credits: 3

## HIST 319 - History of Women to 1750

An analysis of women from the earliest civilizations to 1750 through the examination of the lives of ordinary and outstanding women from different levels of the social order.

Credits: 3

## HIST 320 - History of Women from 1750 to the Present

This course will examine the role of women in the period 1750 to present from a cross-cultural perspective. Through the use of gender as a category of historical analysis and with particular reference to socio-economic differences, we will study the participation of women in the emergence of new national-states; the history of women's labor in the household and the work place, the contribution of women in intellectual life, and the participation of women in the social/political reform movements of the modern era.

Credits: 3

## HIST 322 - Germany in the Twentieth Century

Germany's drive for recognition as a world power, culminating in the horror of World War I, failure of the Weimar Republic, the rise of Hitler and Nazism, World War II and the division into East and West Germany.

Credits: 3

## HIST 331 - England to 1689

Celts, Anglo-Saxons, Danes, and Normans in the formation of a nation, the medieval period, and the Tudor and Stuart centuries.

Credits: 3

## HIST 332 - England Since 1689

The rise to world dominion through sea power to the rivalry with Germany.

Credits: 3

## HIST 337 - Indians of the United States

The history and culture of the seven major geographic-cultural groups of native Americans, including analysis of the clash of cultures with European civilization.

Credits: 3

## HIST 340 - The Historical and Political Legacies of the Vietnam Era

Course examines the roots, nature, and course of the war in Vietnam and the accompanying cultural and political developments in the United States with a particular concern for the influences of war on our contemporary social and political context. Cross-listed as POLS 340.

Credits: 3

## HIST 344 - The American City

Growth, impact and significance of the city and town in American history. A study of ethnology, religion, and education as factors in urban development with emphasis on industrialization as it transformed society and thought.

Credits: 3

## HIST 350 - The American Civil War

An examination of the causes, conduct, and consequences of the American Civil War with emphasis given to its political, constitutional, economic, military, and social ramifications.

Credits: 3

## HIST 351 - Latin America to 1830

Political, economic, and social development of the Spanish and Portuguese colonies in America, culminating in the winning of national independence.

Credits: 3

## HIST 352 - Latin America Since 1830

Developing countries of Latin America, their internal problems, international relations and historic evolution to the present.

Credits: 3

## HIST 357 - Challenges of the American Experience I (to 1865)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## HIST 358 - Challenges of the American Experience II (1865 to the e Present)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## HIST 362 - Africa North of the Zambezi

Language groups, migrations of peoples, external influences, colonialism, and the emergence of independent states.
Credits: 3

## HIST 363 - Southern Africa

The Republic of South Africa and the High Commission Territories of Bechuanaland, Swaziland, and Basutoland, including colonialism, imperialism, war, and reconstruction in the 19th and 20th centuries.

Credits: 3

## HIST 370 - History and the Bible

The history of the eastern Mediterranean area from 1800 B.C.-100 A.D. with a study of the Old and New Testaments in order to evaluate their historical validity.

Credits: 3

## HIST 371 - History of Jews

A course surveying Jewish life and thought from early Roman times to the present. Four thousand years of Jewish participation in most world civilizations are examined, and religious, philosophical, and literary contributions are analyzed.

Credits: 3

## HIST 380 - Egyptology

A study of the history and culture of ancient Egypt from the old kingdom through the new kingdom. The methods and disciplines utilized in the study of an ancient culture will be analyzed and evaluated.

Credits: 3

## HIST 381 - East Asian Military Traditions

This course will examine the cultural and historic factors which have distinguished Asian military traditions from the time of Sun Tze's The Art of War in the fifth century B.C. through the nineteenth and twentieth century writings of such Asian militarists as Yamagata Aritomo, Mao Tse-Tung, and Vo Nguyen Giap.

Credits: 3

## HIST 382 - Modern Asian Pacific Rim

This course will examine the political, social, economic, technological, and cultural factors which have affected the evolution of the Pacific Rim into the most vital and growing economic region on the globe.

Credits: 3

## HIST 386 - Modern China

This course will examine the history of modern China, the major factors, which influenced its course, and the values, which operate in Chinese society today.

Credits: 3

## HIST 422 - Greece and Rome

The major events in the evolution of classical civilization.

Credits: 3

## HIST 424 - The Middle Ages

Major political, social, economic, and intellectual events in the feudal era of Western Europe.

Credits: 3

## HIST 426 - French Revolution and Napoleon

French political, social, and economic affairs in the 18th century, the French Enlightenment, the Revolution, and the Napoleonic period.

Credits: 3

## HIST 427 - Nineteenth Century Europe

From the Congress of Vienna to the outbreak of World War I, examining nationalism, liberalism, the response to industrialism, imperialism, the rise of the alliance system, and the breakdown of nineteenth century order.

Credits: 3

## HIST 435 - Pennsylvania

The founding and growth of Pennsylvania to the present.
Credits: 3

## HIST 437 - Westward Movement

The westward movement in continental United States from discovery to 1890. Special emphasis on the transMississippi West.

Credits: 3

## HIST 442 - Studies in U.S. Women's History

An in-depth investigation into specific topics of women's studies through individual reading assignments and group discussions.

## Prerequisites \& Notes

3 credits in women's studies or permission of the instructor

Credits: 3

## HIST 445 - Environmental Thought in the United States

American philosophical foundations of environmental thought in American history with emphasis upon changing attitudes and evaluations of successes and failures.

Credits: 3

## HIST 450 - History Internship

Supervised placement and research in selected public and private agencies at appropriate institutions.

Credits: Variable

## HIST 451 - U.S. Foreign Relations to 1890

Foreign relations from the beginning of our national history to the era of imperialism and the Spanish-American War.
Credits: 3

HIST 452 - U.S. Foreign Relations Since 1890

American foreign policy from the Spanish-American War to the present.

Credits: 3

## HIST 453 - American Constitutional History and Law

Federal constitution by the Supreme Court, including the growth of constitutional law and political, social, economic, and technological changes. May be used as a political science elective.

Credits: 3

## HIST 455 - Economic U.S. History

American economic development, with emphasis on change and growth in commerce, industry, labor, finance, and governmental participation. May be used as an economics elective.

Credits: 3

## HIST 462 - The Contemporary Middle East

The economic, social, cultural, and political aspects of the Middle East in the perspective of the past.
Credits: 3

## HIST 490 - Independent Study

For history majors or advanced students with a background in history. Prerequisites: QPA of 2.750 in history and permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

HONR 385 - The Great Books

Seminars on selected topics from the classic works of human thought.

Credits: 3

## HONR 386 - The Great Books

Seminars on selected topics from the classic works of human thought.

Credits: 3

HONR 387 - The Great Books

Seminars on selected topics from the classic works of human thought.

Credits: 3

## HONR 388 - The Great Books

Seminars on selected topics from the classic works of human thought.

Credits: 3

## HSA 100 - Introduction to Health Careers

Provides students with an understanding of various career opportunities in health and safety occupations and the opportunity to determine whether their needs, interests, abilities, and values are suited to careers in this area.

Credits: 3

## HSA 231 - The US Healthcare System

Open to all students interested in learning more about the structure, function, and organization of the US healthcare system on federal, state, regional, and local levels. Includes discussions about government reforms, emerging trends, and other issues affecting the healthcare system. Students learn about the different types of care, such as acute, long term, and home healthcare as well the key health agencies and organizations.

Credits: 3

## HSA 332 - Health Services Planning and Evaluation

Provides knowledge about compr4ehensive health planning, comparing concepts, models, and approaches.

## Prerequisites \& Notes

AHEA 111, 231, or permission of the instructor

Credits: 3

## HSA 335-Current Topics in Health Care

This course examines current topics in healthcare from the interests of various constituencies and organizations. It is designed to introduce students to the identification and study of current economic, regulatory, or operational issues and emerging trends impacting the healthcare industry. Matters of healthcare policy, healthcare reform, current clinical and nonclinical healthcare developments, policy process, and advocacy will also be examined. The course presents a critical analysis of selected topics of interest to the health services management major as well as other students interested in healthcare.

Credits: 3

## HSA 436-Technology in Health Care

This course is designed to provide an understanding of common computer systems, applications, and the intelligent use of information in healthcare in areas such as: patient care, management, administration, strategic-decision support, and e-health. It presents information on hardware, software, networks, and data management to enable students to become conversant with modern technology and its use in healthcare organizations. Emphasis is placed on strategic planning, decision support, continuous quality improvement, and high-quality patient care

## Prerequisites \& Notes

CPSC 210, HSA 231, MGMT 365

Credits: 3

## HSA 437-Financial Management of Health Care

This course is designed to enrich the student's understanding of common financial management and reimbursement strategies used in profit and not-for-profit healthcare organizations. It will expose students to various techniques necessary to equip them with practical skills to manage finances in a variety of healthcare settings such as: acute, longterm, and ambulatory care.

## Prerequisites \& Notes

ACCT 209, 210, 231, FIN 320, HSA 231

Credits: 3

## HSA 439 - The Accreditation and Survey Process

Focuses on the role, responsibilities, standards, and requirements involved in accrediting and licensing survey s for health care organizations.

## Prerequisites \& Notes

AHEA 111, 231, or permission of the instructor, and senior standing as a health-related major
Credits: 3

## HSAF 100 - Introduction to Health Careers

Provides students with an understanding of various career opportunities in health and safety occupations and the opportunity to determine whether their needs, interests, abilities, and values are suited to careers in theis area.

Credits: 3

## HSAF 101 - Personal Health

Addresses concerns pertaining to college living and life-long health. Emphasizes wellness with its emotional, physical, and social components.

Credits: 3

## HSAF 102-Health Appraisal and Promotion

Discusses the role of wellness in health promotion. Identifies major health risks and examines primary prevention strategies utilizing select health appraisal instruments for the promotion of optimal individual and community health. Exposes students to agencies, which serve as resources for health information.

## Prerequisites \& Notes

For community health, exercise science, physical education and school health majors only or by permission of the instructor. Freshman or sophomore standing only

Credits: 3

## HSAF 103 - Health Problems and Intervention Strategies

Examines the major health problems and health risks to determine feasible secondary and tertiary intervention strategies to maintain, promote and manage the highest possible level of individual and community health. Explores behaviors and circumstances that are barriers to seeking and/or adhering to medical advice.

## Prerequisites \& Notes

For community health, exercise science, physical education and school health majors only or by permission of the instructor. Freshman or sophomore standing only

Credits: 3

## HSAF 118 - Introduction to Safety

Examines basic safety practices, incident causal factors, and preventative measures.

Credits: 3

## HSAF 205 - First Aid and Safety

Emphasizes prevention, protection from further harm and correct response to common emergencies resulting from trauma and/or illness confronting the citizen. Provides opportunity to earn certification in American Red Cross First Aid and American Red Cross CPR or American Health Association CPR.

Credits: 3

## HSAF 210 - Introduction to Community Health

Provides a broad foundation of information related to the structure and functioning of the community health system including the identification and examination of programs, providers, and current problems associated with the delivery of health services.

Credits: 3

## HSAF 211 - Women and Health Care

Examines the role of women as consumers and as both formal and informal providers of health services.

Credits: 3

## HSAF 218 - Hazard Analysis and Legislative Compliance

Examines workplace hazards as they relate to the Occupational Safety and Health Act and promulgated standards (Labor and Construction).

Credits: 3

HSAF 262 - Health Foundations

Identifies and examines the major health problems at the individual and community level. Emphasizes health information and resources that can be used to deliver developmentally appropriate primary, secondary and tertiary education and/or interventions among diverse populations.

Credits: 3

## HSAF 301 - Introduction to Health Education

Examines the knowledge and skills necessary to function effectively as a community, school, or worksite health educator. Emphasizes the responsibilities and competencies of the Certified Health Education Specialist.

Prerequisites \& Notes
HSAF 102 and 103 or permission of the instructor

Credits: 3

## HSAF 309 - Introduction to the Study of Disease

Provides a broad foundation of information related to the etiology, pathophysiological mechanisms, signs and symptoms, outcomes and current therapies for selected communicable, genetic, and chronic diseases.

## Prerequisites \& Notes

BIOL 216 and 217, HSAF 110 or permission of the instructor

Credits: 3

## HSAF 310 - Environmental Health

Explores the ecologic, economic, ethical, toxicologic and epidemiologic bases for environmental health both globally and within the community setting. Emphasizes the relationship between biological, physical and chemical agents and disease/injury causation and the role of government.

## Prerequisites \& Notes

CHEM 104 or 107 and BIOL 210 or permission of the instructor

Credits: 3

## HSAF 311 - International Health

Examines significant health problems affecting populations in various areas of the world. Focuses on the integration of disease patterns with geographic areas and cultural practices.

## Prerequisites \& Notes

Junior standing

Credits: 3

## HSAF 312 - Data Management for Health Science

Explores methods of data collection, manipulation and reporting for health science. Includes computer applications.

## Prerequisites \& Notes

MATH 114 or permission of the instructor. Basic computer literacy is recommended

Credits: 3

## HSAF 313-Biostatistics

Provides a broad foundation of knowledge related to data analysis in health science. Emphasizes the interpretation of health data and the computer skills for common statistical methods.

Prerequisites \& Notes
HSAF 312

Credits: 3

## HSAF 314 - Nutrition and Health

Examines basic scientific principles of nutrition, specifically all major nutrient classes in terms of functions, food sources, and adequate intakes along with sensitivity to diverse needs throughout the life cycle.

Credits: 3

## HSAF 316 - Human Sexuality

Surveys a broad range of information about human sexuality from biological, psychological, sociological, religious, and medical perspectives.

Credits: 3

## HSAF 318 - Principles of Industrial Hygiene

Concentrates upon the recognition, evaluation and control of employee-related workplace health hazards. Course includes an instrumentation component.

Prerequisites \& Notes
Co-requisite: CHEM 104 or 107 or permission of the instructor
Credits: 3

## HSAF 319 - Principles of Industrial Hygiene II

Concentrates upon the recognition, evaluation and control of employee-related workplace hazards. Course includes an instrumentation component. Courses is a continuation of HSAF 318.

## Prerequisites \& Notes

Co-requisite: CHEM 104 or 107 or permission of the instructor

Credits: 3

HSAF 328 - Comprehensive Emergency Management and Fire Services

Examines comprehensive emergency management and fire services as they relate to preparing, preparing, protecting, and preserving resources.

Credits: 3

## HSAF 338 - Ergonomics and Human Factors

Examines workplace design adversities as well as their remediation by the safety function. Added from Allied Health Section and was HSAF 288 in this section.

Credits: 3

## HSAF 348 - Hazardous Materials and Waste Management

Examines the recognition, evaluation, control, and legislative compliance of hazardous materials and waste through effective safety management.

## Prerequisites \& Notes

Co-requisite: CHEM 104 or 107 or permission of the instructor

Credits: 3

## HSAF 358 - Construction Safety

Safety requirements and responsibilities for the construction industry.

Credits: 3

## HSAF 362 - Introduction to School Health Education

The course focuses on Health Education curriculum design and developmentally appropriate instructional techniques that can be utilized for health promotion in school settings. Course included universally accepted pedagogical strategies with opportunities to observe and practice these strategies with $\mathrm{K}-12$ health education content.

## Prerequisites \& Notes

Include successful completion of AHEA 262 (minimum grade of " C ") and acceptance into the College of Education

Credits: 3

## HSAF 368 - Injury and Damage Incidents Evaluation

Focuses on the investigation, analysis, and evaluation of injury and property damage incidents. Includes Workers' Compensation and insurance variations.

Credits: 3

## HSAF 406 - Health Measurement and Evaluation

Provides basic proficiency in quantitative and qualitative approaches to health education and health promotion program measurement and evaluation. Current trends and issues in community, school and worksite health promotion are brought to bear on the problems of implementing and interpreting the results of formative and summative evaluation.

## Prerequisites \& Notes

HSAF 210 and senior standing or permission of the instructor
Credits: 3

## HSAF 408 - Contemporary Safety Topics and Issues

Examines emerging issues and topics in the field of safety. Must be taken the semester prior to internship.

Credits: 3

## HSAF 410 - Epidemiology

Introduces the study of population-based research and statistical methods of inquiry regarding distribution and determination of disease in human populations. Emphasizes appropriate study design and investigative techniques and interpretation of findings related to community health.

## Prerequisites \& Notes

HSAF 313 Biostatistics or a statistics course approved by the instructor with permission of the instructor and senior standing

Credits: 3

## HSAF 414 - Death and Dying

This course develops effective understanding of all aspects of death and dying including: grief, funerals, children's view of death, psychological aspects of death, doctors and death, and euthanasia.

Credits: 3

## HSAF 418 - Security in the Workplace

Examines security in relation to protecting assets and resources within an enterprise.
Credits: 3

## HSAF 424 - Nutrition and Exercise

Focuses on the specific nutritional requirement for physical conditioning for persons involved in competitive and/or recreational activities. Emphasizes the development and/or maintenance of a healthy cardiovascular system.

Prerequisites \& Notes
HSAF 314 or BIOL 216

Credits: 3

## HSAF 428 - Motor Transportation Fleet Safety

Focuses on the essential elements of a comprehensive motor transportation fleet safety program as they relate to protecting and conserving enterprise resources.

Credits: 3

## HSAF 448 - Management and Integration of Safety

Involves the development, integration, evaluation, management, and cost containment strategies of the safety function within an enterprise.

Credits: 3

## HSAF 450 - Internship

Provides opportunity to apply theory and develop competencies through a work-related experience in an appropriate cooperating enterprise. Summers only.

## Prerequisites \& Notes

Program/major specified requirements and/or approval of instructor

Credits: 12

## HSAF 455 - Student Teaching - Health Science

Under the guidance of a cooperating teacher and university supervisor, students engage in two, eight week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

Credits: 12, 6, 3

## HSAF 462 - Teaching and Assessment in Health Education

The course focuses on Health Education instructional and assessment techniques that can be utilized for health promotion in school settings. Development of a comprehensive school health curriculum using the National Health Education Standards and the Assessment Framework is emphasized including appropriate scope and sequence, content, and skills. Special emphasis is accorded to meeting the Pennsylvania Chapter Regulations that address teaching HIV/AIDS, human sexuality, family life education, tobacco, alcohol, and other forms of chemical abuse. The course includes a practica in the schools that allows opportunities to observe, practice, and reflect on specific school health education teaching strategies.

## Prerequisites \& Notes

Successful completion of HSAF 262 and 362 (minimum of "C") and acceptance in the the College of Education

Credits: 3

## HSAF 488 - Safety Training and Development

Examines workplace safety training and development as they relate to employer work task performance at all levels of an organization.

Credits: 3

HSAF 490 - Independent Study

Students study under the supervision of a professor on a specific and significant topic.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 6

## INBS 227 - Introduction to International Business

An overview of the basic issues that firms often encounter while conducting business in a global environment. Such issues are in the areas of international trade and finance; diversified legal, political and cultural environments; international management and marketing; international accounting and taxation; and inter-national human resource management.

Credits: 3

## INBS 326 - International Economics

Alternative exchange rate systems, commercial trade policies, balance of payments, adjustment mechanisms and the role of international financial organizations.

Prerequisites \& Notes
ECON 201, 202

Credits: 3

## INBS 427 - International Financial Management

International monetary systems, sources of funds, import and export financing; taxation of multinational corporations, foreign investment decisions; political risk; risk of foreign exchange losses; management of working capital.

## Prerequisites \& Notes

FIN 320

Credits: 3

## INDS 101 - FYRST Seminar

The FYRST Seminar provides students with an opportunity to become integrated into the university's community of learners by exploring the purpose and value of higher education, participating in the teaching/learning process, addressing academic and social transition issues, utilizing campus programs, services, and technology, and developing academic skills and learning strategies during the student's first semester at Slippery Rock University. This course is a one credit hour course designed to especially and exclusively assist first year students in their adjustment to college life at Slippery Rock University. No prerequisite. Enrollment by advisement. Open to first year students only. The credit earned in this course counts for graduation requirements.

Credits: 1

## INDS 102 - Learning Strategies

Students will develop effective learning strategies, goals, and decision-making skills with a view toward implementing a plan to remove their probationary status and become a student in "good academic standing." This course is primarily for students on academic probation (other students may enroll with the permission of the instructor). Credits earned count for graduation as an elective.

Credits: 1

## INDS 103 - Major and Career Exploration

This course will examine various decision making models as they are applied to choosing an academic major and/or career. Through a variety of in-class and out-of-class activities students will integrate self-knowledge and knowledge about majors and the world of work.

Credits: 1

## INDS 110 - Research.com

A self-paced course introducing the resources of the university library. Students will select and use print and non-print materials on assigned subjects as preparation for future library research in various disciplines. Should be scheduled after the completion of any remedial English or communication course. For course information contact the library.

Credits: 1

## ITAL 101 - Italian Language and Culture I

A broad and practical working foundation in the language.

Credits: 3

ITAL 102 - Italian Language and Culture II

A broad and practical working foundation in the language.

Prerequisites \& Notes
ITAL 101 or equivalent

Credits: 3

ITAL 103 - Italian Language and Culture III

A broad and practical working foundation in the language.

## Prerequisites \& Notes

ITAL 102 or equivalent

Credits: 3

ITAL 202 - Intermediate Italian I

Comprehensive review of Italian grammar with emphasis on developing the students' abilities for proficient oral and written accomplishments.

## Prerequisites \& Notes

Ital 103 or equivalent

Credits: 3

## ITAL 210 - Italian Literature in Translation

A study of the main currents of Italian literature from the Renaissance to modern times, with emphasis on the contemporary. The course will be given entirely in English; no knowledge of Italian required. For non-Italian majors.

Credits: 3

## ITAL 490 - Independent Study

Students have an opportunity to study selected areas in greater concentration.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## JAPN 101 - Japanese language Culture I

This course will provide an introduction to the Japanese language.
Credits: 3

## JAPN 102 - Japanese language Culture II

This course will provide an introduction to the Japanese language.

Prerequisites \& Notes
JAPN 101 or equivalent

Credits: 3

## JAPN 103 - Japanese language Culture III

This course will provide an introduction to the Japanese language.
Prerequisites \& Notes
JAPN 102 or equivalent

Credits: 3

## JAPN 202 - Intermediate Japanese I

Comprehensive review of Japanese language with emphasis on developing the students' abilities for proficient oral and written accomplishments.

## Prerequisites \& Notes

JAPN 103 or equivalent.

Credits: 3

## KORN 101 - Korean Language and Culture I

A broad and practical working foundation in the language.

Credits: 3

## KORN 102 - Korean Language and Culture II

A broad and practical working foundation in the language.
Prerequisites \& Notes
KORN 101 or equivalent

Credits: 3

## KORN 103 - Korean Language and Culture III

A broad and practical working foundation in the language.
Prerequisites \& Notes
KORN 102 or equivalent
Credits: 3

## KORN 202 - Intermediate Korean I

Comprehensive review of Korean grammar with emphasis on developing the students' abilities for proficient oral and written accomplishments.

Prerequisites \& Notes
KORN 103 or equivalent
Credits: 3

## KORN 306 - Modern Korean Civilization

Course analyzes the most significant characteristics, foreign influences, and cultural traditions that have comprised Korean culture from its origins to 1900 . Course will be taught in English and is open to all interested students.

Credits: 3

## MARS 110 - Introduction to Oceanography

An introduction to marine sciences with emphasis on physiography of the ocean basins, waves, tides, near-shore processes, the physical and chemical nature of seawater, circulation, characteristics of marine plant and animal communities, history of oceanography, and law of the sea.

Credits: 3

## MARS 200 - Art Workshop-Painting of the Coastal Area

This workshop is to be an intensive involvement with the esthetic qualities of the seashore and its environs. Paintings using various media (watercolor, oils, acrylics) according to personal preference will be created. Slides and other reproductions of relevant paintings by artists of historical importance will be examined and discussed.

Credits: 3

## MARS 201 - Art Workshop-Pewter and Marine Jewelry

This workshop will explore pewter and objects found in the near-shore environment as materials for making jewelry and body ornaments. Participants will learn techniques of casting, fabricating, soldering, tinning and bezel setting for the purpose of creating unique pieces.

Credits: 3

## MARS 204 - Writing about the Sea

A survey of literature from several genre, both fiction and nonfiction, which focuses on maritime themes and topics.
Credits: 3

## MARS 211 - Field Methods in Oceanography

A course to familiarize students with the dynamic marine environment and field work on board small research vessels, to instruct in the use and application of standard oceanographic instruments and sampling devices and to promote and encourage independent research through the initial stages of scientific projects.

## Prerequisites \& Notes

MARS 110 or permission of the instructor

Credits: 3

## MARS 212 - Navigation

This course covers navigation, i.e. the art and science of safely bringing a boat from one position to another in a body of water. Topics covered are piloting, navigation within sight of land, electronic navigation, radio bearings by radio direction finder, LORAN, OMEGA, radar, celestial navigation, circles of equal altitude, navigational triangle, celestial lines of position, celestial fix, Greenwich Mean Time, Greenwich Hour Angle.

## Prerequisites \& Notes

Four years of high school math or permission of the instructor

Credits: 3

## MARS 215 - Marine Wildlife Photography

This class includes an in-depth study of the science of photography and how this relates to the field work of marine biology. The student will develop skills in micro- and macrophotography and an under-standing of the science of optics, filter and camera techniques, and darkroom procedures and techniques. The class will learn various chemical processes for color and black/white photography. Specific articles on marine science photography will be used to develop an understanding both within the marine science laboratory and in the field.

## Prerequisites \& Notes

A chemistry or biology or related laboratory course

Credits: 3

## MARS 221 - Marine Invertebrates

A study of the invertebrate phyla with emphasis on development, reproduction, structure, function and classification of selected marine organisms. Laboratory field experience will be given in collection, preservation and classification of the phyla.

## Prerequisites \& Notes

One year of biology or permission of the instructor

Credits: 3

## MARS 241 - Marine Biology

A study of plant and animal life in the marine environment. Emphasis will be on physical and chemical environmental factors affecting the biota in the inter-tidal, open water, and benthic habitats. Common biota characteristic of each habitat will be investigated in terms of their natural history, morphology, and ecological relationships.

## Prerequisites \& Notes

One semester of biology or permission of the instructor

Credits: 3

## MARS 250 - Wetland Ecology

The ecology and management of wetland wildlife with emphasis on the management of wetlands as ecological systems.

Credits: 3

## MARS 260 - Marine Ecology

A study of the ecology of marine organisms, the relationship of plants and animals to physical, chemical and biological factors and their zonation and communities.

## Prerequisites \& Notes

One year of biology of permission of the instructor
Credits: 3

## MARS 270-Coastal Vegetation

In-depth examination of vegetation falling under the marine influence. Identification of same and determination of factors limiting and controlling their distribution.

Credits: 3

## MARS 285 - Recreation Management/Development in the Coastal Zone

This course focuses on the recreation component of coastal zone management. The nature, extent, location, and value of coastal recreation behavior will be probed and related to the overall coastal management framework.

Credits: 3

## MARS 298 - Selected Topics

An opportunity for intensive study on a specific topic of interest. Course duration from 1 to 3 weeks.

## Prerequisites \& Notes

Variable, depending on the topic

Credits: 1 to 3

## MARS 300 - Behavior of Marine Organisms

Concepts of ethology; discussion and observation of the influences of external and internal factors on the regulation and control of behavior of organisms living in the marine coastal environment.

## Prerequisites \& Notes

General Biology

Credits: 3

## MARS 310 - The Mammals of Coastal Ecosystems

Distribution, behavior, physiology, adaptations, and ecological relationships of mammals with special emphasis on the mammals of the Delmarva Peninsula. In addition to the lectures and seminars, the laboratory and field work will deal with the productivity, population dynamics, species diversity, ecoenergetics, and behavior of local mammals.

## Prerequisites \& Notes

General Biology
Credits: 3

## MARS 320 - Marine Microbiology

A survey of methods and concepts of marine microbiology. Attention will be given to technical aspects of sample collection, microbial ecology of the marine environment, enrichment culturing, methods of enumeration and identification with emphasis on marine bacteria.

## Prerequisites \& Notes

General Microbiology

Credits: 3

## MARS 330 - Tropical Invertebrates

An introduction to tropical invertebrates. A variety of collection and observation methods will be used to sample nearshore and reef areas. Emphasis will be on systematics and ecology using the communities approach. One week at Wallops will be intensive review of general systematics and ecology of marine invertebrates. The last two weeks in Florida will involve sampling and identifying species and describing ecological communities.

## Prerequisites \& Notes

Marine Invertebrates, Invertebrate Zoology or a thorough Zoology course with permission of the instructor
Credits: 3

## MARS 331-Chemical Oceanography

Treatment of a wide range of oceanic chemical phenomena, including salinity and age of the oceans, sources and residence times of chemical constituents in seawater, geochemical cycles of mineral resources and trace elements. Sampling and laboratory analysis techniques.

## Prerequisites \& Notes

MARS 110 and one year of Chemistry or permission of the instructor
Credits: 3

## MARS 342 - Marine Botany

A study of marine and marine fringe plants of the Middle Atlantic Coast, their taxonomy, ecology, distribution, life histories, physiology, and economic status. Techniques of collecting, preserving, identifying and herbarium cataloging will be stressed. Exercises in plant ecology and marine microbiology will be included.

## Prerequisites \& Notes

A course in General Biology and/or one semester of Botany or permission of the instructor
Credits: 3

## MARS 343 - Marine Ichthyology

A study of the fishes. Specimens collected along the eastern seaboard by the students will be used to illustrate the anatomy, physiology and systematics of this major vertebrate group. Field collections will also give students the opportunity to observe the relationships of these animals to their biotic and physical environment.

## Prerequisites \& Notes

General Biology and/or permission of the instructor

Credits: 3

## MARS 344 - Anatomy of Marine Chordates

A course designed to familiarize the students with the qualitative aspects of the speciation process; to lay ground work for understanding the basic and specialized structure of marine chordates; to trace the most obvious or important trends (and their functional significance) in the evolution of this basic structure in various vertebrate lines. The laboratories will be devoted primarily to dissection of representative marine vertebrates, particularly those collected live on field trips.

## Prerequisites \& Notes

Six credits of Biology, including General Zoology

Credits: 3

## MARS 345-Ornithology

Introduces the student to avian fauna of the seacoast and at the same time enables comparison with inland species. In addition to the field work providing visual and vocal identification, lecture material will include information on the distribution, behavior, physiology, and anatomy of birds.

## Prerequisites \& Notes

One year of biology or permission of the instructor

Credits: 3

## MARS 350 - Physiology of Marine Invertebrates

Mechanisms and regulation of organ function in marine invertebrates with emphasis on homeostasis. Invertebrate examples of fundamental principles and of unique physiological mechanisms.

## Prerequisites \& Notes

Introductory Biology

Credits: 3

## MARS 362 - Marine Geology

Structure and sedimentology of the ocean basins and shores; methods of exploration, general feature of the ocean basins, and theory of ocean basin evolution.

## Prerequisites \& Notes

MARS 110 and one semester of Geology or permission of the instructor

Credits: 3

## MARS 364 - Physical Oceanography

A study of the physical properties of the oceans to include: mass and energy budgets; theory of distribution of variables; cause, nature, measurement, analysis and prediction of tides, currents and waves; basic instrumentation in field work.

## Prerequisites \& Notes

Introductory Oceanography, one year of Physics, Algebra and Trigonometry and one semester of Calculus or permission of the instructor

Credits: 3

## MARS 394 - Comparative Physiology of Marine Organisms

This course will provide an introduction to the physiology of marine organisms utilizing a comparative approach. The lecture will introduce the topics of respiration, circulation, metabolism, osmoregulation, thermoregulation, locomation and sensory systems by drawing comparisons between the mechanisms and strategies utilized by a wide range of marine organisms. Laboratory and field work will focus on the physiological responses of marine plants and animals to common environmental stresses such as salt load, temperature variation, depletion of dissolved oxygen, and tidal flux. This will be accomplished through measurements and observations in the field, as well as through experimental manipulations in a laboratory setting.

Credits: 3

## MARS 398 - Developmental Biology of Marine Organisms

Principles of development and differentiation in marine organisms at the molecular and supramolecular levels of organization. The laboratory will include both descriptive and experimental embryology.

## Prerequisites \& Notes

Introductory Biology
Credits: 3

## MARS 420 - Marine Micropaleontology

Designed for students majoring in either biological or geological sciences, the course will deal with modern, living representatives of micro-organisms important in the fossil record. Particular emphasis will be on the taxonomy, morphology, evolution and ecological affinities of the Foraminifera (Sarcodina), but other groups, including the Radiolaria, Diatoms and Ostracoda, will also be considered. Laboratory and field aspects will include sample collecting, preparation and analysis.

## Prerequisites \& Notes

One year of Geology or Biology or permission of the instructor

Credits: 3

## MARS 431 - Ecology of Marine Plankton

Study of the phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons will be made between the planktonic populations of various types of habitats in relation to primary and secondary productivity.

## Prerequisites \& Notes

One year of Biology
Credits: 3

## MARS 432 - Marine Evolutionary

The study of the ecological mechanisms underlying evolutionary processes. This course is broad in scope and requires that students synthesize both evolutionary and ecological concepts and theory into an understanding of how organisms adapt to their environment. Marine, estuarine, and maritime organisms will be used as model systems and processes, which affect marine populations, will be emphasized.

Credits: 3

## MARS 441 - Biology of Molluscs

The Mollusca is the second largest group of animals and perhaps the most diverse in terms of morphological, ecological and behavioral variations. This course offers an evolutionary, functional, and ecologic approach to studying this important group of organisms.

Credits: 3

## MARS 457 - Marine Geophysics

A study of the basic geophysical theories about the transmission of shock waves, and gravity and magnetic fields to the understanding and exploration of the continental shelves and marine basins. The student is introduced to the use and limitations of the portable seismic refraction seismograph, gravity meter, and magnetometer.

## Prerequisites \& Notes

Oceanography, Physical Geology, College Algebra or permission of the instructor

Credits: 3

## MARS 458 - Exploration Methods in Marine Geology

A study of geophysical and geologic instruments and techniques used to penetrate the water layer obscuring the ocean bottom topography and geology and the results of some of that effort. Emphasis is on laboratory and field assignments using basic geophysical and geological instruments. The students are introduced to the use, limitations and results of these instruments.

## Prerequisites \& Notes

Physical Geology and one year of Math or permission of the instructor

Credits: 3

## MARS 459-Coastal Geomorphology

A study of coastal environments with an emphasis on understanding the inter-relationship among land forms, processes and materials. The student will participate in field studies conducted along high and low wave energy environments.

## Prerequisites \& Notes

One year of Geology or Physical Geography (landforms) or permission of the instructor

Credits: 3

## MARS 464 - biological Oceanography

Interdisciplinary study of the interactions between biological communities and the ocean environment as seen by distributions of coastal plankton, fish, and benthic invertebrates. Projects will involve boat trips to sample populations and to quantitatively document environmental variables with state of the art equipment, laboratory and field experiments to determine rate processes, and visits to nearby field and government laboratories. Examples of project topics include transport of plankton at barrier island passes, effect of submarine banks on fish populations, ground truth data for satellite imagery, and other current topics in biological oceanography.

## Credits: 3

## MARS 491-Coral Reef Ecology

A study of coral reef structure, formation, types, and the relationships of reef organisms to their environment. Emphasis is given to species diversity, identification, symbioses, and effects of temperature, salinity, light, nutrient concentration, predation, and competition on the abundance and the distribution of coral reef organisms.

Credits: 3

## MARS 492 - Marine Mammals

A study of the distribution, population ecology, behavior, physiology and adaptations of marine mammals. Student projects will entail collecting physiological and behavioral data at field sites and at facilities studying marine mammals.

Credits: 3

## MARS 493 - Behavioral Ecology

Designed to present animal behavior within an ecological and evolutionary context. Presents mathematical and theoretical framework of behavioral ecology. An in-depth exploration of the ways in which the behavior of animals is influenced by the environment, especially with regard to resource distribution.

## Credits: 3

## MARS 494 - Marine Aquaculture

This course will include the theory and practice of raising organisms for food and for the aquarium trade. Techniques for raising economically important organisms from the egg stage to marketable size and their food supplies will be studied.

## Prerequisites \& Notes

Nine credits in Biology

Credits: 3

## MARS 498 - Selected Topics

An opportunity of intensive study in a specific topic of interest. Course duration from 1 to 3 weeks.

## Prerequisites \& Notes

Variable, depending on the topic

Credits: 1 to 3

## MARS 500 - Problems in Marine Science

Graduate or undergraduate students after advanced registration in the course may complete the course requirements by either of the following options: Students may elect to take a 200 -, 300-, or 400-level course in which they desire advanced work and complete, in addition to the regular course requirements, an approved project in the area under the direction of the instructor; or the student may do an independent research project. In order to be admitted to the latter option, students must submit a research proposal to the academic committee of the Marine Science Consortium. The proposal must include the scope and duration of the proposed research, equipment and facilities required, and a recommendation and approval from the academic advisor.

Credits: 3

## MARS 510-Oceanography (In-Service Teachers)

An introductory course to familiarize teachers with the nature of the oceans and create an awareness of the interdisciplinary nature of oceanography. The teachers will have the opportunity to participate in field activities, develop skills in handling marine instruments, and perform investigative laboratory activities, which will enhance their effectiveness in classroom teaching of oceanography through personal experience.

Credits: 3

## MARS 530 - Coastal Sedimentation

Study of depositional environments of marine-dominated shorelines; their processes, sediments, sedimentary facies; models for recognizing ancient counterparts in rock record; and growth and development of barrier island-tidal deltas.

## Prerequisites \& Notes

Introductory course in Sedimentation or Marine Geology or permission of the instructor

Credits: 3

## MARS 540 - Environmental Science Education

A field-oriented approach to environmental education with special emphasis on coastal zones. Students will relate their own disciplines to education for quality environments. Consideration will be given to sources, facilities, methods, techniques and concepts used in environmental education.

Credits: 3

## MARS 555-Ocean Resources

This is an introductory course designed to emphasize the potential resources and the feasibilities of their exploitation. The role of ocean science and engineering in accomplishing this goal will be covered.

Credits: 3

## MATH 113-Mathematics as a Liberal Art

A cultural enrichment course, which introduces topics and applications from different branches of mathematics.

## Prerequisites \& Notes

ACSD 110 or equivalent

Credits: 3

## MATH 115 - Financial Mathematics

Methods of solving problems arising from the growth of money through simple and compound interest. Savings accounts, loans, financing, mortgages, depreciation, bonds, pensions and life insurance are included.

Prerequisites \& Notes
ACSD 110 or equivalent

Credits: 3

## MATH 118 - Elementary Geometry

A survey of Euclidean geometry and related elementary geometrical concepts. This course is not appropriate for those planning to teach geometry at the secondary level, but would be an excellent choice for those who will be teaching mathematics in the elementary school.

Prerequisites \& Notes
ACSD 110 or equivalent
Credits: 3

## MATH 120 - Intermediate Algebra

Linear functions, equations, inequalities, polynomials, algebra of functions, rational exponents, quadratic equations and inequalities, systems of equations.

## Prerequisites \& Notes

ACSD 110 or equivalent

Credits: 3

## MATH 122 - Matrices and Linear Programming

The algebra of matrices with applications in linear programming, algebraic and graphical solutions.

## Prerequisites \& Notes

MATH 120 or equivalent

Credits: 3

## MATH 123 - Introduction to Applied Calculus

The course is compatible with the background and interests of students not majoring in the physical sciences or mathematics. The theorem-proof approach of differential and integral calculus is replaced with the explanationexample approach. Non-traditional applications are stressed.

MATH 120 or MATH 125 or equivalent

Credits: 3

## MATH 125 - Precalculus

A bridge between high school algebra and calculus involving polynomial, trigonometric, logarithmic, exponential functions, complex numbers, and the conic sections. Prerequisite: MATH 120; or two years of high school algebra and appropriate placement score.

## Prerequisites \& Notes

MATH 120; or two years of high school algebra and appropriate placement score

Credits: 4

## MATH 131 - Discrete Mathematics

Topics include propositional calculus, set theoretic concepts, relations and functions, mathematical induction, counting techniques, recursion, graphs and trees.

## Prerequisites \& Notes

MATH 125; or high school Trigonometry/Precalculus and appropriate placement score
Credits: 3

## MATH 152 - Elementary Statistics I

Introduction to statistics: descriptive statistics, bivariate data, elementary probability, random variables, normal and binomial probability distributions, Central Limit Theorem, confidence intervals, and hypothesis Testing. MINITAB will be used.

## Prerequisites \& Notes

ACSD 110 or equivalent

Credits: 3

## MATH 153 - Elementary Statistics II

Review of Elementary Statistics I, confidence intervals and hypothesis testing of means, proportions, and standard deviations of two populations, nonparametric methods, multinomial experiments, linear regression and correlation, and one-way ANOVA. MINITAB will be used.

## Prerequisites \& Notes

MATH 152 or equivalent

Credits: 3

## MATH 210 - Elementary Mathematics I

This course explores the development of the number system through the integers, using a problem solving approach. Emphasis on place-value and arithmetic operations is essential if these future teachers are to engage their students in
higher levels of mathematics.

## Prerequisites \& Notes

ACSD 110 or equivalent and Freshman II standing

Credits: 3

## MATH 225 - Calculus I

Limits, continuity. Differential calculus for algebraic and transcendental functions of one variable with applications. Introduction to integration.

## Prerequisites \& Notes

MATH 125; or high school Trigonometry/Precalculus and appropriate placement score

Credits: 4

## MATH 230 - Calculus II

Integral calculus for functions of one variable. Definite integrals, techniques of integration, and applications. Infinite series.

Prerequisites \& Notes
MATH 225

Credits: 4

## MATH 231 - Calculus III

Differential and integral calculus for functions of several variables and vector fields.

Prerequisites \& Notes
MATH 230

Credits: 4

## MATH 235 - Modern Concepts of Mathematics

Basic logic and set theory, and methods of proof, induction, relations and functions.

Prerequisites \& Notes
MATH 225, 131

Credits: 3

## MATH 240 - Linear Algebra and Differential Equations

Computational aspects of matrices, determinants, systems of linear equations, vector spaces, linear dependence, Wronskian, characteristic values, elementary differential equations, separable and exact equations, linear differential equations with constant coefficients.

## Prerequisites \& Notes

MATH 230

Credits: 3

## MATH 252 - Introduction to Statistical Modeling

Linear correlation and regression, multiple regression, polynomial regression, analysis of variance, and time series. MINITAB will be used for data analysis.

Prerequisites \& Notes
MATH 153 and either MATH 123 or 125

Credits: 3

## MATH 280 - Theory of Interest

A rigorous, calculus based treatment of the Theory of Interest, including simple and compound interest, annuities, bonds, yield rates, amortization schedules and sinking funds, yield curves, and practical applications. This course is intended to prepare students for the Society of Actuaries examination on the theory of interest.

Prerequisites \& Notes
MATH 230

Credits: 3

## MATH 301 - Differential Equations I

First and second order differential equations, infinite series solutions, Laplace transforms, existence and uniqueness theorems.

Prerequisites \& Notes
MATH 240; Co-requisite: MATH 231

Credits: 3

## MATH 302 - Differnetial Equations II

A continuation of MATH 301. Systems of ordinary differential equations, non-linear systems and stability, partial differential equations.

Prerequisites \& Notes
MATH 301

Credits: 3

## MATH 304 - Geometric Structures

Finite and infinite axiomatic systems, including Euclidean and projective geometrics.

## Prerequisites \& Notes

MATH 235

Credits: 3

## MATH 309 - Linear Algebra

Vector spaces, linear transformations, matrices, and determinants with applications.

Prerequisites \& Notes
MATH 240; Co-requisite: MATH 231

Credits: 3

## MATH 310 - Elementary Mathematics II

This course finishes exploring the development of the number system by looking at the rational and real numbers and then looks at measurement, statistics, and probability. This course will not count as an upper division course for mathematics majors.

Prerequisites \& Notes
MATH 210

Credits: 3

## MATH 311 - Introduction to Operations Research

Linear programming, transportation and assignment problems, branch and bound algorithm, simulation.

Prerequisites \& Notes
MATH 122 or 240

Credits: 3

## MATH 313 - Introductory Analysis I

Cardinality, topology of the real numbers, sequences and continuity of functions.

Prerequisites \& Notes
MATH 231, 235

Credits: 3

## MATH 314 - Introductory Analysis II

Differentiation, Mean Value Theorem, Integration, series (convergence, exponential, trigonometric functions).

## Prerequisites \& Notes

MATH 313

Credits: 3

## MATH 315 - Numerical Mathematics

The mathematics of computation and approximation, interpolation, calculating the roots of equations, curve fitting linear systems, numerical differentiation and integration and error analysis.

## Prerequisites \& Notes

Some competence in a computer language. Prerequisite MATH 240

Credits: 3

## MATH 320 - Theory of Numbers

A study of the properties of natural numbers and number theoretic functions.

Prerequisites \& Notes
MATH 235

Credits: 3

## MATH 325-Abstract Algebra I

An introduction to groups. Topics include integers mod $n$, cyclic groups, permutation groups, normal subgroups, isomorphisms, finite Abelian groups.

Prerequisites \& Notes
MATH 235

Credits: 3

## MATH 326-Abstract Algebra II

An introduction to rings. Topics include integral domains, fields, polynomial rings.

## Prerequisites \& Notes

MATH 325

Credits: 3

## MATH 331 - Mathematical Methods of Physics

Applications in physical science and engineering of the following: vector analysis, complex variables, Fourier and Laplace transforms, linear algebra, and some boundary value problems. Cross-linked as PHYS 331. This course may be counted as a physics course or as a mathematics course, but not both.

Prerequisites \& Notes
PHYS 211 and MATH 240; Co-requisite: MATH 231

Credits: 3

## MATH 335 - Mathematical Modeling

A general introduction to mathematical modeling involving optimization, dynamic and probabilistic models. Specific topics selected from dimensional analysis, optimization techniques, continuous and discrete modeling, stability analysis, linearization, eigenvalue methods, qualitative analysis, Markov chains, regression models, simulation techniques, and others as time permits.

Prerequisites \& Notes
Math 231 and Math 240

Credits: 3

## MATH 352 - Mathematical Statistics I

An introduction to the mathematical foundations of probability theory including discrete and continuous probability distributions, random variables, mathematical expectation, momentuo, and moment generating functions.

Prerequisites \& Notes
MATH 230

Credits: 3

## MATH 353 - Mathematical Statistics II

Functions of random variables, sampling distributions, introduction to mathematical theory of statistical inference, including methods of moments, estimators, maximum likelihood estimators, sufficient statistics, interval estimates, and hypothesis testing.

Prerequisites \& Notes
MATH 352

Credits: 3

## MATH 403-Elementary Topology

Topological properties of the real line.

Prerequisites \& Notes
MATH 309, 313

Credits: 3

## MATH 406 - Intermediate Analysis

Selected topics.

## Prerequisites \& Notes

MATH 314
Credits: 3

## MATH 407-Complex Variables

Complex numbers, analytic functions, complex integration, convergence of sequences and series, and applications.

Prerequisites \& Notes
MATH 313

Credits: 3

## MATH 490 - Independent Study

Supervised study in advanced area. Prerequisites: Two 300 -level mathematics courses, a 3.000 QPA in major, permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## MATH 491-Mathematics Seminar

Designed to broaden the students' backgrounds by investigating topics in mathematics not usually taught in the regular curriculum. Students may elect to take course up to three times.

## Prerequisites \& Notes

MATH 235 and one 300 or higher level math course or permission of the instructor

Credits: 1

## MATH 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## MGMT 103 - Introduction to Business

An overview of the business world, including an introduction to economic systems, governmental actions, marketing, management, finance, accounting and human resources management. Course does not count toward any economics or business major or minor.

Credits: 3

## MGMT 219-Business Statistics

Probability and statistics in a business environment, encompassing descriptive statistics, probability theory, hypothesis testing, linear regression and correlation. Prerequisites: Algebraic proficiency and microcomputer proficiency. Crosslisted as ECON 219.

Credits: 3

## MGMT 250 - Principles of Management

Managerial functions and decision making, including planning, organizing, leading, motivating, controlling and conflict resolving activities in all types of organizational systems. Course does not count toward any economics or business major requirements.

Credits: 3

## MGMT 251 - Organizational Behavior

Study of the satisfaction, motivation, learning, problem solving and growth of persons in organizational settings. Conceptual learning is combined with self-analysis in each area.

Credits: 3

## MGMT 320 - Operations Management I

Operations strategy and competition, production systems and processes, decision analysis and graphical linear programming, quality management and process control, facility location and layout, work methods and measurement, inventory management and project evaluation review technique (PERT).

Prerequisites \& Notes
MGMT/ECON 219

Credits: 3

## MGMT 352-Operations Management II

Management science analysis and optimization techniques including linear programming, transportation algorithm, waiting line models, simulation processes, network models, materials requirement planning, and forecasting methods applied to a variety of business operations situations.

Prerequisites \& Notes
MGMT 320 and 250 or 251

Credits: 3

## MGMT 353 - Development of Management Thought

Contemporary management as the result of an evolutionary process involving the thoughts and writings of many famous management theoreticians and practitioners.

Prerequisites \& Notes
MGMT 250 or 251
Credits: 3

MGMT 354 - Human Resources Management

The basic processes, principles, policies, tools, techniques and methods that are utilized in the personnel function in any organization.

Prerequisites \& Notes
MGMT 250 or 251

Credits: 3

## MGMT 357 - International Operations Management

Issues critical to globalization of manufacturing operations including global planning and organization, comparison of operations, international operations strategy, managerial issues in global operations.

Prerequisites \& Notes
MGMT 320 and 250 or 251

Credits: 3

## MGMT 360 - Total Quality Management

Managerial and technological issues that are necessary to understand and implement quality assurance programs including human resource development, strategic planning, management information systems, cost effectiveness, implementation procedures and statistical quality control.

Prerequisites \& Notes
MGMT 219 or MATH 114

Credits: 3

## MGMT 364 - Recruitment and Selection

Components of an effective selection program including job analysis, employment testing, and selection interviews with emphasis on the legal issues and relevant federal regulations.

Prerequisites \& Notes
MGMT 354

Credits: 3

## MGMT 365 - Management Information Systems

Managerial and technological issues that are necessary to understand, establish, manage and use information systems in all functional areas of organizations.

Prerequisites \& Notes
CPSC 210 and MGMT 250 or 251
Credits: 3

## MGMT 450 - Internship

Supervised placement, work, and research in selected public and private organizations.

## Prerequisites \& Notes

Application and permission of the instructor

Credits: 3 to 12

## MGMT 451 - Employment Law

This course covers the law as it applies to all aspects of the employer - employee relation, including union activity, discrimination, selection, testing and employment contracts.

## Prerequisites \& Notes

MGMT 250 or 251

Credits: 3

## MGMT 452-Management-Labor Relations

Modern industrial relations from the perspective of both management and labor, including the historical development of large-scale business and organized labor.

Prerequisites \& Notes
MGMT 250 or 251

Credits: 3

## MGMT 453-Collective Bargaining

The major issues in the negotiation process: bargaining, public policy implications, impasse resolution, strikes, and legislation affecting collective bargaining.

Prerequisites \& Notes
MGMT 250 or 251

Credits: 3

## MGMT 454 - Management Seminar

Contemporary methods and theories of management are discussed in terms of current organizational practice.

Prerequisites \& Notes
MGMT 320, 354 and senior standing

Credits: 3

## MGMT 455-Compensation Management

Rationale, composition and administration of employee reward systems considering both the internal organizational factors and external environmental factors. Contemporary issues such as comparable worth, CEO salaries, and the rising cost of benefits are included.

## Prerequisites \& Notes

MGMT 354

Credits: 3

## MGMT 456 - Management and Society

Social, ethical, economic, legal and political restraints on organizational decisions.

Prerequisites \& Notes
MGMT 250 or 251

Credits: 3

## MGMT 457 - International Management

Examination of environments, resources, strategies and models of managerial functions in international organizations.

Prerequisites \& Notes
MGMT 251

Credits: 3

## MGMT 458 - Business Policy

An integrating course dealing with the factors that influence the formulation and implementation of organizational strategy and policy.

Prerequisites \& Notes
All other core courses and business administration senior

Credits: 3

## MGMT 459 - Small Business Institute

In this course student consulting teams analyze actual problem situations of cooperating regional businesses.

## Prerequisites \& Notes

Application and permission of the instructor
Credits: 3

## MGMT 460-Training and Development

Training and development as a human resource management function supporting organizational strategic planning including: training needs analysis, training program objectives, training methods, management and organization development methods, program evaluation and cost-benefit analysis, and training budgeting. Current trends in training and development will be covered including computer based training, competency based training and cross cultural training.

## Prerequisites \& Notes

MGMT 354

Credits: 3

## MGMT 465-Management of Information Technology

Management and specific technical concepts and techniques applied to the function of providing information technology services to the organization.

## Prerequisites \& Notes

MGMT 250 or 251, three credits of CPSC

Credits: 3

## MGMT 490 - Independent Study

In-depth reading and/or research with the guidance of a faculty member in an area selected by the student. Prerequisites: 12 credits in major courses, application, and permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted.

Credits: 1 to 3

## MODL 101 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as ESL 101.

Credits: 3

## MODL 102 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as ESL 102.

Credits: 3

## MODL 103 - English as a Second Language

A broad and practical working knowledge of the English language for non-native speakers. Courses will prepare the non-native speaker for college coursework in English. Language laboratory attendance required. Students will be placed at the appropriate level based on standardized examination. Cross-listed as ESL 103.

Credits: 3

## MODL 151 - Self-Instructional Languages

Self-Instruction in basic language is open to serious students with previous language background. The course is designed to develop the speaking, listening comprehension of the student on a basic level. Course may be repeated in
each language up to a maximum of three credits. Not applicable for modern language requirement or liberal studies. Students may choose from any world languages not available in the regular offerings.

Credits: 1 to 9

## MODL 152 - Self-Instructional Languages

Self-Instruction in basic language is open to serious students with previous language background. The course is designed to develop the speaking, listening comprehension of the student on a basic level. Course may be repeated in each language up to a maximum of three credits. Not applicable for modern language requirement or liberal studies. Students may choose from any world languages not available in the regular offerings.

## Prerequisites \& Notes

Three hours of MODL 151 is the prerequisite for MODL 152.

Credits: 1 to 9

## MODL 153 - Self-Instructional Languages

Self-Instruction in basic language is open to serious students with previous language background. The course is designed to develop the speaking, listening comprehension of the student on a basic level. Course may be repeated in each language up to a maximum of three credits. Not applicable for modern language requirement or liberal studies. Students may choose from any world languages not available in the regular offerings.

## Prerequisites \& Notes

Three hours of MODL 152 is the prerequisite for MODL 153.
Credits: 1 to 9

## MODL 250 - Introduction to Western Languages

An introduction to the major languages of the Western world and a presentation of the historical relationships among the languages, along with a practical initiation to the languages.

Credits: 3

## MRKT 230 - Principles of Marketing

An analytical overview of market decision-making including product, pricing, place, and promotional strategies.

Credits: 3

## MRKT 331 - Distribution Management

Principles, methods and problems relating to wholesaling, retailing and physical distribution management.

Prerequisites \& Notes
MRKT 230

Credits: 3

## MRKT 332 - Business Marketing

A management perspective of the internal and external environments affecting the demand for industrial goods; marketing intelligence and control; and marketing strategy for product, service, channel, price, and promotional components.

Prerequisites \& Notes
MRKT 230

Credits: 3

## MRKT 333-Consumer Behavior

The buying process with emphasis on economic, social, cultural and psychological determinants of consumer choice.

Prerequisites \& Notes
MRKT 230

Credits: 3

## MRKT 334 - Advertising Management

Management of advertising, including background, roles, planning, media strategy, message, testing, research, evaluation, and administration of advertising.

Prerequisites \& Notes
MRKT 230

Credits: 3

## MRKT 335-Retail Management

Store location and layout, retail personnel management, merchandising policies and control, and marketing strategy.

## Prerequisites \& Notes

MRKT 230 or permission of the instructor
Credits: 3

## MRKT 336 - Sales Management

Provides foundations of sales processes and management to prepare students for careers in selling or sales management.

## Prerequisites \& Notes

MRKT 230 or permission of the instructor
Credits: 3

MRKT 338 - E-Commerce

The role, structure, organization, and use of the Internet as a channel of distribution to conduct electronic commerce.

## Prerequisites \& Notes

MRKT 230, CPSC 110 or equivalent

Credits: 3

## MRKT 430 - Marketing Research

Research methodology as a managerial tool used in problem solving and decision making in marketing.

Prerequisites \& Notes
ECON 219 or MGMT 219, MRKT 230 and senior standing

Credits: 3

## MRKT 431 - Marketing Seminar

Advanced topics in marketing with emphasis on the analysis and solution of marketing problems.

Prerequisites \& Notes
MGMT 320, MRKT 332, 333 and senior standing

Credits: 3

## MRKT 437 - International Marketing

The marketing issues of firms engaged in international business with emphasis on strategies for successful foreign market penetration.

Prerequisites \& Notes
MRKT 230

Credits: 3

## MRKT 450 - Internship

Supervised placement, work, and research in selected public and private organizations.

## Prerequisites \& Notes

Application and permission of the instructor

Credits: 3 to 12

## MRKT 490 - Independent Study

In-depth reading and/or research with the guidance of a faculty member in an area selected by the student.

## Prerequisites \& Notes

12 credits of major courses, application, permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## MS 100 - The American Military Experience

Establishes a framework of reference regarding military service, an understanding of the profession of arms and its impact on and place in American society. The course begins the Army's leadership development process. Includes a lab. ++

## Prerequisites \& Notes

None. Fills a Liberal Studies requirement as a Human Institutions \& Personal Relationships Enrichment Course.

Credits: 3

## MS 102 - Principles of Leadership

This course continues the student's introduction to the military organization and begins to teach leadership techniques and principles using military situations as a point of reference. Various academic studies of civilian-based leadership theories and styles are examined and compared to military theories and styles. Includes a lab. ++

Credits: 3

## MS 201 - Basic Military Skills

Begins to teach basic military skills such as map reading, land navigation using a map and compass, first aid, weapons marksmanship, drill and small unit tactics. Includes a lab. ++

Credits: 3

## MS 202 - Intermediate Military Skills

Continues instruction in map reading, land navigation using a map and compass, first aid, weapons marksmanship, drill and small unit tactics. Begins to integrate all skills into leading small units in tactical situations. Includes a lab. ++

Credits: 3

## MS 250 - ROTC Basic Leadership Practicum

A five week experience of training and evaluation conducted in a tactical framework at Fort Knox, Kentucky. Students learn basic military skills which enable them to take advanced military science courses on campus.

## Prerequisites \& Notes

Permission of the department chair required to take this course

Credits: 3

## MS 280 - Leadership Seminar

This course involves individualized instruction, research and presentation on research in areas required to fill in a students knowledge base to be able to move into the ROTC advanced course. This course may be taken only once.

## Prerequisites \& Notes

3.0 QPA in military science studies, permission of the instructor, department chairperson and dean of the college

Credits: 3

## MS 301 - Fundamentals of Tactical Operations

Focuses on tactics at the squad level. Students learn the troop leading procedures and how to give both oral and written operations orders. Students continue to enhance their skills at land navigation and rifle marksmanship. Physical fitness conditioning is a mandatory part of the laboratory. Includes a lab. ++

## Prerequisites \& Notes

Permission of the department chair required to take this course
Credits: 4

## MS 302 - Advanced Military Skills

Continues development of intermediate level cadet leader skills in preparation for attendance at the Leadership Development and Assessment Course at Ft. Lewis, Washington. The course is supplementary in scope and includes leadership, written and oral communications, operations and tactics, land navigation, weapons, and radio and wire communications subjects. A laboratory experience is required.++

## Prerequisites \& Notes

Permission of the department chair required to take this course
Credits: 4

## MS 350-ROTC Advanced Leadership Practicum

A five week experience of training and evaluation conducted in a tactical framework at Fort Lewis, Washington. Cadets demonstrate and learn advanced military skills. Cadets also demonstrate their leadership skills in a variety of leadership positions in tactical and non-tactical environments.

Credits: 3

## MS 401 - Leadership Dimensions and Concepts

This course begins the transition from cadet to officer. Focus is on organization of the Army, command and staff functions, officer and noncommissioned officer evaluation system, military law and development of training. Students participate in a staff ride to a significant military battlefield. Includes a lab. ++

## Prerequisites \& Notes

Permission of the department chair required to take this course
Credits: 4

## MS 402 - Officership and the Profession of Arms

This course continues the transition from cadet to officer. Students begin a critical analysis of the role of the officer and the noncommissioned officer, and their interaction, at the platoon, company and battalion level. Students are introduced
to joint operations and conduct some critical analysis of national military policy. Includes a lab. ++

## Prerequisites \& Notes

Permission of the department chair required to take this course

Credits: 4

## MS 450 - The Cadet Troop Leadership Internship

A three-week experience as a leader in a U.S. Army unit, under the close supervision of a U.S. Army lieutenant or captain. It gives the student the opportunity to lead real soldiers in a real U.S. Army unit. The intern will actually supervise the planning and execution of the unit's scheduled training.

## Prerequisites \& Notes

MS 301, 302, 350 and professor of military science permission

Credits: 3

## MS 490 - Independent Study

In-depth reading and research in an area of particular interest to the student with the guidance of an individual faculty member. This course may be taken only once.

## Prerequisites \& Notes

3.000 QPA in military science studies, permission of the instructor, department chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## MUSI 101 - Introduction to Music

A survey course designed to develop the student perception and understanding of changing musical styles and practices in Western culture.

Credits: 3

## MUSI 102 - Introduction to World Music

A course designed to survey non-Western musical traditions and practices. Emphasis is given to the music of India, Russia, Japan, Africa, the Middle East, and the American Indian.

Credits: 3

## MUSI 104 - Introduction to American Music

A survey course designed to develop student knowledge and understanding of music composed and performed in the United States between 1620 and the present.

Credits: 3

The stylistic development of jazz and its relevance to society.

Credits: 3

## MUSI 106 - Introduction to Jazz Performance

This course will introduce the high school music student to jazz pedagogy at the university level. Emphasis will be placed on performing skills, theory, improvisation, ear training and music technology. Course may be repeated up to four credits.

## Prerequisites \& Notes

Proficiency on a musical instrument or voice

Credits: 3

## MUSI 107 - Fundamentals of Music

Understanding and using music notation and terminology.

Credits: 3

## MUSI 108 - Flute Camp

The SRU "Flute Camp" will give high school flutists an opportunity to be on the SRU campu during the Summer Arts Academy for an intensive 2 week program involving all aspects of flute performance. Follow up involvment of the high school students during the fall semester will consist of their attendance at flute related university events and critical writing about the concerts/rehearsals/master classes they observed during the fall component.

Credits: 1

## MUSI 109- Jazz Combo

Students will meet weekley with the appropriate faculty member to work on jazz performance in the small group (combo) setting. Study of phrasing, articulation, jazz theory, improvisation, and other jazz performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 113 - Saxophone Quartet

Students will meet weekly with the appropriate faculty member to work on literature selected for their performance ability level. Study of phrasing, articulation, balance, blend, intonation, and other performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 114 - Symphonic Wind Ensemble

A chamber ensemble composed of select musicians chosen by audition, performing contemporary literature as well as transcriptions for winds and percussion. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Prerequisites \& Notes

Audition with the director of the Symphonic Wind Ensemble and the instrumental faculty
Credits: 1

## MUSI 115-Concert Choir

Approximately 50 men and women, chosen by audition, to study and perform the great choral literature from the Renaissance to the present. Concerts are presented on campus and on tours. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 116 - Choral Ensemble

A large ensemble chosen by audition to study and perform the great choral literature. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 117-Chamber Singers

A selected small ensemble of well-blended voices appropriate for the performance of madrigals and other chamber vocal music. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 118 - Marching Pride

The Marching Pride performs during the half time at football games, both home and away, and for other special events. Much of its music is specially arranged. Open to all students. Six hours a week rehearsal during the football season. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 119-Concert Band

The Concert Band members are carefully selected to provide a balanced instrumentation of the best players. Music written for concert band is the main repertoire. Concerts on campus. Six hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 120-Jazz Ensemble

The SRU Jazz Ensemble performs jazz literature from all eras of jazz history including big band, bop, hard bop, fusion and contemporary. This ensemble often performs with guest artists of national and international stature, both on and off campus. Membership in this ensemble requires an audition. Four and one-half hours of rehearsal per week. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 121-Orchestra

The orchestra is a string ensemble, with winds and percussion added when needed, which performs music from the orchestral repertoire. Admission by audition. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 122 - Chamber String Ensemble

The Chamber String Ensemble is a small ensemble selected for the study and performance of chamber music written for strings. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 123 - Brass Ensemble

The university's Brass Ensemble is a select ensemble of brass (and percussion) players who study and perform music from all historical periods. Both large brass choir works and small chamber brass works are performed. The ensemble performs on and off campus. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 124 - Woodwind Ensemble

The Woodwind Ensemble is a small select ensemble of woodwind players who study and perform music for woodwinds from all historical periods. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 125 - Percussion

This small select ensemble of percussionists studies and performs music composed and transcribed for both percussion and mallet ensembles. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 126 - Flute Choir

The SRU Flute Choir is made up of a select group of flutists who will rehearse and perform a variety of music written for flute ensemble. Audition required. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 127-Orientation to Music Therapy

Orientation to the field of music therapy through lectures, readings, films, and field trips to clinical centers.

Credits: 1

## MUSI 128 - Applied Alexander Technique

This course is an introduction to the Alexander Technique in which the students will examine their habitual movement patterns in order to encourage positive energy usage within the body. This technique heightens kinesthetic sensitivity, offering performers a control that is fluid and lively, thus lessening chances of performance injury. The principles of this technique are based on an understanding of human anatomy, which promotes ease, and freedom of movement, balance, flexibility, and coordination. Course may be repeated up to two credits.

Credits: 1

## MUSI 131 - Class Piano I

For beginners with no previous keyboard experience. Fundamentals of note reading, beginning piano repertoire, melody harmonization and improvisation. Of particular value to the student desiring to gain a working knowledge of the piano either as a classroom tool or for personal use. Music majors only.

Credits: 1

## MUSI 132 - Class Piano II

Continued development of skills begun in Class Piano I (MUSI 131). Music majors only.

## Prerequisites \& Notes

MUSI 131 or equivalent

Credits: 1

## MUSI 133 - Class Voice I

Designed for the purpose of studying basic singing technique and thereby producing a good vocal tone; valuable to the student interested in improving his/her vocal skill. Music majors only.

Credits: 1

## MUSI 134-Class Voice II

The pedagogy of singing is emphasized via individual teaching demonstrations thereby enabling students to improve their ability to communicate basic vocal principles to other students. Music majors only.

## Prerequisites \& Notes

MUSI 133

Credits: 1

## MUSI 135-Class Strings

A study of the fundamental concepts needed to play and teach beginning string instruments (violin, viola, cello, or string bass). No previous experience required. Instruments are provided by the university.

Credits: 1

## MUSI 137-Class Guitar I

A study of the fundamental concepts needed to play and teach beginning guitar. Students must provide their own instruments. Music majors only.

Credits: 1

## MUSI 138 - Class Guitar II

Continued development of skills begun in Class Guitar I (MUSI 137). Music majors only.
Prerequisites \& Notes
MUSI 137 or equivalent
Credits: 1

## MUSI 151 - Music Theory and Analysis I

The student will study the grammar and literature of music through composition, analysis, listening, and performance. Three class meetings each week.

## Prerequisites \& Notes

Co-requisite: MUSI 154

Credits: 2

## MUSI 154 - Musicianship Skills I

Students will develop aural, rhythmic and keyboard skills, sight-singing, intervals and triad recognition, simple meters, basic harmonic progressions, major and minor keys and scales. Two class meetings each week.

## Prerequisites \& Notes

Co-requisite: MUSI 151

Credits: 1

## MUSI 165 - Applied Performance Voice

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $165,265,365$ may each be taken two times for a total of 18 credits; MUSI 465 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 166 - Applied Performance Piano

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 166, 266, 366 may each be taken two times for a total of 18 credits; MUSI 466 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 167 - Applied Performance Strings

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $167,267,367$ may each be taken two times for a total of 18 credits; MUSI 467 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 168 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 168, 268, 368 may be taken two times for a total of 18 credits; MUSI 468 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 169 - Applied Performance Brass

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $169,269,369$ may each be taken two times for a total of 18 credits; MUSI 469 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 170 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 170,270 and 370 may each be taken two times for a total of 18 credits; MUSI 470 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 179-Applied Music

With the approval of the applied music teacher, lessons are available in piano, voice, and any of the standard string, brass, woodwind or percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 181 - Applied Voice

With the approval of the applied music teacher, lessons are available in voice. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 182 - Applied Strings

With the approval of the applied music teacher, lessons are available in standard string instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 183 - Applied Brass

With the approval of the applied music teacher, lessons are available in standard brass instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 184 - Applied Woodwinds

With the approval of the applied music teacher, lessons are available in standard woodwind instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 185 - Applied Percussion

With the approval of the applied music teacher, lessons are available in standard percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 199 - Fundamental Skills in Music Therapy

Designed to prepare music therapy majors in fundamental clinical skills in music therapy necessary for working with a variety of client populations. It includes identifying client needs, delineating goals and objectives, task analysis and treatment strategies (re-creative techniques) through the application of functional music skills. Group processes and leadership techniques appropriate for various clientele.

## Prerequisites \& Notes

MUSI 127,137

Credits: 1

## MUSI 201 - Studies in Children's Music

Listening, moving, playing instruments, singing and creating using repertoire suitable for children of various developmental levels.

Credits: 3

## MUSI 205-Music in Recreation

A practical study of the ways and means of planning effective music programs for leisure and recreation and developing the competencies needed by a music leader in recreation.

Credits: 3

## MUSI 209- Jazz Combo

Students will meet weekley with the appropriate faculty member to work on jazz performance in the small group (combo) setting. Study of phrasing, articulation, jazz theory, improvisation, and other jazz performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 213 - Saxophone Quartet

Students will meet weekly with the appropriate faculty member to work on literature selected for their performance ability level. Study of phrasing, articulation, balance, blend, intonation, and other performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 214 - Symphonic Wind Ensemble

A chamber ensemble composed of select musicians chosen by audition, performing contemporary literature as well as transcriptions for winds and percussion. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Prerequisites \& Notes

Audition with the director of the Symphonic Wind Ensemble and the instrumental faculty

Credits: 1

## MUSI 215 - Concert Choir

Approximately 50 men and women, chosen by audition, to study and perform the great choral literature from the Renaissance to the present. Concerts are presented on campus and on tours. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 216 - Choral Ensemble

A large ensemble chosen by audition to study and perform the great choral literature. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 217 - Chamber Singers

A selected small ensemble of well-blended voices appropriate for the performance of madrigals and other chamber vocal music. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 218 - Marching Pride

The Marching Pride performs during the half time at football games, both home and away, and for other special events. Much of its music is specially arranged. Open to all students. Six hours a week rehearsal during the football season. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 219-Concert Band

The Concert Band members are carefully selected to provide a balanced instrumentation of the best players. Music written for concert band is the main repertoire. Concerts on campus. Six hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 220 - Jazz Ensemble

The SRU Jazz Ensemble performs jazz literature from all eras of jazz history including big band, bop, hard bop, fusion and contemporary. This ensemble often performs with guest artists of national and international stature, both on and off campus. Membership in this ensemble requires an audition. Four and one-half hours of rehearsal per week. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 221 - Orchestra

The orchestra is a string ensemble, with winds and percussion added when needed, which performs music from the orchestral repertoire. Admission by audition. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 222 - Chamber String Ensemble

The Chamber String Ensemble is a small ensemble selected for the study and performance of chamber music written for strings. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 223 - Brass Ensemble

The university's Brass Ensemble is a select ensemble of brass (and percussion) players who study and perform music from all historical periods. Both large brass choir works and small chamber brass works are performed. The ensemble performs on and off campus. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 224 - Woodwind Ensemble

The Woodwind Ensemble is a small select ensemble of woodwind players who study and perform music for woodwinds from all historical periods. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 225 - Percussion

This small select ensemble of percussionists studies and performs music composed and transcribed for both percussion and mallet ensembles. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 226 - Flute Choir

The SRU Flute Choir is made up of a select group of flutists who will rehearse and perform a variety of music written for flute ensemble. Audition required. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 228 - Therapeutic Musical Strategies

Designed to further prepare music majors in various therapeutic musical strategies (receptive and compositional techniques) through the application of functional music skills, group processes and leadership techniques appropriate for various clientele.

## Prerequisites \& Notes

MUSI 127, 137, 138, 199 or concurrent enrollment

Credits: 1

## MUSI 229-Clinical Integration

A supervised clinical experience allowing the music therapy student practical experience in a variety of community health care agencies and educational settings.

## Prerequisites \& Notes

MUSI 127, 137, 138, 199 or concurrent enrollment

Credits: 0/1

## MUSI 230-Clinical Integration

A supervised clinical experience allowing the music therapy student practical experience in a variety of community health care agencies and educational settings.

Prerequisites \& Notes
MUSI 228, 229

Credits: 0/1

## MUSI 233-Chamber Music Performance

A chamber music ensemble (of various instrumental and/or vocal combinations) which studies and performs music from many style periods. Two hours a week rehearsal time. Course may be repeated up to four credits. Permission of the instructor.

Credits: 1

## MUSI 234 - Class Piano III

Continued development of skills acquired in Class Piano II to prepare music majors for piano proficiency exam, including sight-reading, transposition, playing by ear, technique and repertoire.Music majors only.

## Prerequisites \& Notes

MUSI 132 or equivalent

Credits: 1

## MUSI 235 - Class Piano IV

Continued development of skills acquired in Class Piano III to prepare music majors for piano proficiency exam, including sight-reading, transposition, playing by ear, technique and repertoire. Music majors only.

Prerequisites \& Notes
MUSI 234 or equivalent
Credits: 1

## MUSI 236 - Behavioral Techniques in Music Therapy

Consideration of historical bases and experimental evidences of the influence of music on behavior; principles of music therapy; behavioral observation techniques.

Prerequisites \& Notes
MUSI 127, 199 and 228

Credits: 2

## MUSI 245 - Class Brass

A study of the fundamental concepts needed to play and teach beginning brass instruments (French horn, trumpet, trombone, baritone horn, tuba) both as soloists and in ensemble.

Credits: 1

## MUSI 246 - Class Woodwinds

A study of the fundamental concepts needed to play and teach beginning instruments of the woodwind family and the factors peculiar to each instrument (flute, oboe, clarinet, bassoon and saxophone).

Credits: 1

## MUSI 247 - Class Percussion

A study of the fundamental concepts needed to play and teach beginning percussion instruments (pitched and nonpitched).

Credits: 1

## MUSI 253 - Music Theory and Anallysis II

This course is a continuation of Comprehensive Musicianship I. The student will study musical literature written between 600-1750 through composition, analysis, aural discrimination, diatonic harmony, modal counterpoint, and
performance. Three class meetings each week.
Prerequisites \& Notes
MUSI 151 or equivalent; Co-requisite: Should be taken concurrently with MUSI 256

Credits: 2

## MUSI 254 - Music Theory and Analysis III

This course is a continuation of the Comprehensive Musicianship I and II semesters in which the student will study the musical literature of the years 1750-1900 through the means of chromatic harmony, analysis, score reading, aural discrimination, composition and performance. Three class meetings each week.

## Prerequisites \& Notes

MUSI 253 or equivalent; Co-requisite: should be taken concurrently with MUSI 257

Credits: 2

## MUSI 255 - Music Theory and Anlysis IV

This course is a continuation of the Comprehensive Musicianship I, II and III sequence. Musical literature of the 20th century will be approached through analysis, listening, score reading, composition and performance. Three class meetings per week.

## Prerequisites \& Notes

MUSI 254 or equivalent; Co-requisite: should be taken concurrently with MUSI 258

Credits: 2

## MUSI 256 - Musicianship Skills II

Students will work on more advanced harmonies, cadences, phrases, basic harmonization, triadic patterns, sight-singing skip, compound meters. Two class meetings per week.

## Prerequisites \& Notes

MUSI 154 or equivalent; Co-requisite: should be taken concurrently with MUSI 253

Credits: 1

## MUSI 257 - Musicianship Skills III

Continued study of chromatic harmony and more complex melodic passages, complex meters. Two class meetings per week.

Prerequisites \& Notes
MUSI 256 or equivalent; Co-requisite: should be taken concurrently with MUSI 254
Credits: 1

## MUSI 258 - Musicianship Skills IV

Study of rhythmic counterpoint and late 19th century and 20th century harmony. Two class meetings per week.

## Prerequisites \& Notes

MUSI 257 or equivalent; Co-requisite: should be taken concurrently with MUSI 255

Credits: 1

## MUSI 265 - Applied Performance Voice

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $165,265,365$ may each be taken two times for a total of 18 credits; MUSI 465 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 266 - Applied Performance Piano

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $166,266,366$ may each be taken two times for a total of 18 credits; MUSI 466 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 267 - Applied Performance Strings

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $167,267,367$ may each be taken two times for a total of 18 credits; MUSI 467 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 268 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $168,268,368$ may be taken two times for a total of 18 credits; MUSI 468 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 269 - Applied Performance Brass

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $169,269,369$ may each be taken two times for a total of 18 credits; MUSI 469 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 270 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 170, 270 and 370 may each be taken two times for a total of 18 credits; MUSI 470 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 273 - History of Music I

A survey of musical styles from the ages of classical Greece and Rome through the Baroque period. Important composers and their literature will be discussed in relation to artistic, social, political, and economic conditions of their period. A reading knowledge of music is essential.

## Prerequisites \& Notes

MUSI 101 or permission of the instructor
Credits: 3

## MUSI 275-Keyboard Music

This course will examine the music literature for western keyboard instruments using live and recorded performances.

Credits: 3

## MUSI 276 - Songs \& Singers

This course will examine music literature for voice. Areas of consideration include solo songs, opera, oratoria, and vocal chamber music.

Credits: 3

## MUSI 278 - Literature of the American Musical Theater

A study of the changing styles in the musical theater from 1860 to current Broadway musicals, rock operas, and operetta. Study conducted through the use of recordings, scores and participation.

Credits: 3

## MUSI 279 - Applied Piano

With the approval of the applied music teacher, lessons are available in piano. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 281 - Applied Voice

With the approval of the applied music teacher, lessons are available in standard voice. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 282 - Applied Strings

With the approval of the applied music teacher, lessons are available in string instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 283-Applied Brass

With the approval of the applied music teacher, lessons are available in standard brass instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 284 - Applied Woodwinds

With the approval of the applied music teacher, lessons are available in standard woodwind instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 285-Applied Percussion

With the approval of the applied music teacher, lessons are available in standard percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 299 - Diction for Singers

In this study of language diction for singers, students will learn the International Phonetic Alphabet and apply it to the singing of English, French, German and Italian songs. The course is open to all voice majors.

## Prerequisites \& Notes <br> MUSI 133 or 181

Credits: 1

## MUSI 300 - Marching Band Field Charting

Planning and preparation of half time shows using computer assisted design software and the "corps style" approach. Leadership skills, marching band pedagogy, and hand charting techniques will also be studied.

## Prerequisites \& Notes

One semester prior experience in the Marching Pride or concurrent enrollment

Credits: 1

## MUSI 301 - Women and Music

Explores the musical contributions of women, a group often excluded from studies of music history, from the Middle Ages to the present. Emphasis will be placed on the changing roles of and attitudes towards women as composers, performers, teachers, writers, patrons, and instrument-builders. Focus will be on the music itself, as well as reception history and historical and sociological context. There will also be discussion on the role of gender in shaping musical ideology and experiences.

## Prerequisites \& Notes

MUSI 101 or permission of the instructor

Credits: 3

## MUSI 309- Jazz Combo

Students will meet weekley with the appropriate faculty member to work on jazz performance in the small group (combo) setting. Study of phrasing, articulation, jazz theory, improvisation, and other jazz performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 312 - Music Therapy for Children

Application of music therapy techniques and materials in all areas of mental health and special education.

## Prerequisites \& Notes

MUSI 236 and SPED 100
Credits: 3

## MUSI 313-Saxophone Quartet

Students will meet weekly with the appropriate faculty member to work on literature selected for their performance ability level. Study of phrasing, articulation, balance, blend, intonation, and other performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 314-Symphonic Wind Ensemble

A chamber ensemble composed of select musicians chosen by audition, performing contemporary literature as well as transcriptions for winds and percussion. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Prerequisites \& Notes

Audition with the director of the Symphonic Wind Ensemble and the instrumental faculty
Credits: 1

## MUSI 315-Concert Choir

Approximately 50 men and women, chosen by audition, to study and perform the great choral literature from the Renaissance to the present. Concerts are presented on campus and on tours. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 316 - Choral Ensemble

A large ensemble chosen by audition to study and perform the great choral literature. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 317-Chamber Singers

A selected small ensemble of well-blended voices appropriate for the performance of madrigals and other chamber vocal music. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for
this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 318 - Marching Pride

The Marching Pride performs during the half time at football games, both home and away, and for other special events. Much of its music is specially arranged. Open to all students. Six hours a week rehearsal during the football season. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 319 - Concert Band

The Concert Band members are carefully selected to provide a balanced instrumentation of the best players. Music written for concert band is the main repertoire. Concerts on campus. Six hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 320 - Jazz Ensemble

The SRU Jazz Ensemble performs jazz literature from all eras of jazz history including big band, bop, hard bop, fusion and contemporary. This ensemble often performs with guest artists of national and international stature, both on and off campus. Membership in this ensemble requires an audition. Four and one-half hours of rehearsal per week. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 321 - Orchestra

The orchestra is a string ensemble, with winds and percussion added when needed, which performs music from the orchestral repertoire. Admission by audition. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 322 - Chamber String Ensemble

The Chamber String Ensemble is a small ensemble selected for the study and performance of chamber music written for strings. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional
credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 323 - Brass Ensemble

The university's Brass Ensemble is a select ensemble of brass (and percussion) players who study and perform music from all historical periods. Both large brass choir works and small chamber brass works are performed. The ensemble performs on and off campus. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 324 - Woodwind Ensemble

The Woodwind Ensemble is a small select ensemble of woodwind players who study and perform music for woodwinds from all historical periods. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 325 - Percussion

This small select ensemble of percussionists studies and performs music composed and transcribed for both percussion and mallet ensembles. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 326 - Flute Choir

The SRU Flute Choir is made up of a select group of flutists who will rehearse and perform a variety of music written for flute ensemble. Audition required. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 327 - Psychology of Music

This course combines the study of 1) a survey and analysis of music therapy research in order to provide a foundation for developing skills in formulating a research question, reviewing the literature, designing a study, examining ethical questions related to research, analyzing data and writing reports; and 2) psychological and physiological foundations of musical behavior.

## Prerequisites \& Notes

PSYC 100 or 105 and MUSI 236

Credits: 3

## MUSI 329-Clincial Integration

A supervised clinical experience allowing the music therapy student practical experience in a variety of community health care agencies and educational settings.

Prerequisites \& Notes
MUSI 230

Credits: 0/1

## MUSI 330 - Clinical Integration

A supervised clinical experience allowing the music therapy student practical experience community health care agencies and educational settings.

Prerequisites \& Notes
MUSI 329

Credits: 0/1

## MUSI 332 - Vocal Conducting

This course is designed to give the student a practical knowledge of choral conducting techniques and a theoretical understanding of the Vocal Ensemble and its function from auditions through performance.

## Prerequisites \& Notes

MUSI 133,155 or equivalent
Credits: 1

## MUSI 333 - Instrumental Conducting

The practical aspects of learning to conduct the instrumental ensemble. Students will focus on developing expressive gestures to enhance the basic techniques. Score study, acoustical properties of the instruments, ensemble precision, balance and intonation will be addressed.

## Prerequisites \& Notes

MUSI 151 or equivalent

Credits: 1

## MUSI 334 - Secondary School Music

The course is designed to prepare the student to teach junior and senior high school choral and general music, choose appropriate teaching materials, supervise a music program, and become aware of professional organizations,
workshops, and conferences. Field Experience Required.

## Prerequisites \& Notes

MUSI 134, 332

Credits: 2

## MUSI 335 - Elementary Music Methods

A music education course designed to prepare the music education major to teach elementary classroom/vocal music in the public schools through the study of musical literature, methodologies and materials appropriate for use with children. Field experience required.

## Prerequisites \& Notes

MUSI 134

Credits: 2

## MUSI 336 - Instrumental Methods

Instrumental methods is a music education course designed to prepare the student for a career in public school instrumental music, including: appropriate literature, repair of instruments, public relations, and rehearsal techniques.Field Experience Required.

## Prerequisites \& Notes

MUSI 133, 245, 246, 247 and 333

Credits: 2

## MUSI 337 - Instrumental Rehearsal Techniques

In this course for music education majors, students will analyze and conduct beginning and intermediate musical scores for concert band and orchestra. The student conductor will identify performance errors and learn specific rehearsal techniques to improve the ensemble's performance.

## Prerequisites \& Notes

MUSI 135, 245, 246, 247 and 333

Credits: 1

## MUSI 350 - Computer Technology in Music

This course will introduce students to the technologies that are prevalent in the music and arts world today. Students will study the history of music and technology and work with today's computer music technologies such as, DC-Rom and MIDI, as well as creating software through the use of the program Hypercard.

## Prerequisites \& Notes

MUSI 255

Credits: 2

## MUSI 351 - Arranging \& Orchestration

This course covers the basic concepts of arranging relative to instrumental and vocal groups. Emphasis is placed on the making of arrangements in addition to the transcription of composition.

Prerequisites \& Notes
MUSI 255, 350

Credits: 2

## MUSI 352 - Music Technology

This course will cover the basic techniques, operation and creative use of recording equipment, electronic music equipment, and computer equipment through practical experience in the Department of Music's recording studio, electronic music studio, and computer music laboratory. Application of music technology in music education, composition, performance, and studio work will be addressed.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## MUSI 360 - Keyboard Improvisation

Melody harmonization and improvisation at the keyboard in 20th century popular and jazz styles. One class meeting and one laboratory session each week.

## Prerequisites \& Notes

MUSI 235 or applied equivalent
Credits: 1

## MUSI 361 - Instrumental Improvisation

This course teaches the basic concepts of improvisation, chord notation and chord styles in popular and jazz music styles. Open to all instrumentalists. One class meeting and one laboratory session per week.

## Prerequisites \& Notes

MUSI 254 or permission of the instructor

Credits: 1

## MUSI 365 - Applied Performance Voice

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $165,265,365$ may each be taken two times for a total of 18 credits; MUSI 465 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 366 - Applied Performance Piano

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $166,266,366$ may each be taken two times for a total of 18 credits; MUSI 466 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 367-Applied Performance Strings

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $167,267,367$ may each be taken two times for a total of 18 credits; MUSI 467 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 368 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $168,268,368$ may be taken two times for a total of 18 credits; MUSI 468 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 369-Applied Performance Brass

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $169,269,369$ may each be taken two times for a total of 18 credits; MUSI 469 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition
Credits: 3

## MUSI 370 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 170,270 and 370 may each be taken two times for a total of 18 credits; MUSI 470 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 373 - History of Music II

This course examines the music and culture from the period of the Rococo through the 19th century. Lectures, readings, performances and listening sessions develop the student's musical understanding of the period. A reading knowledge of music is essential.

## Prerequisites \& Notes

MUSI 101 or permission of the instructor
Credits: 3

## MUSI 379 - Applied Piano

With the approval of the applied music teacher, lessons are available in standard piano. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 381 - Applied Voice

With the approval of the applied music teacher, lessons are available in standard voice. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 382 - Applied Strings

With the approval of the applied music teacher, lessons are available in standard string instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 383 - Applied Brass

With the approval of the applied music teacher, lessons are available in standard brass instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 384 - Applied Woodwinds

With the approval of the applied music teacher, lessons are available in standard woodwind instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 385 - Applied Percussion

With the approval of the applied music teacher, lessons are available in standard percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 387 - Applied Counterpoint I

This study and practice of writing music according to contrapuntal theory of the 16th century. Course may be repeated for up to 3 credits.

Prerequisites \& Notes
MUSI 255

Credits: 1

## MUSI 388 - Applied Counterpoint II

The study and practice of writing music according to contrapuntal theory of the 18th century. Course may be repeated for up to 3 credits.

Prerequisites \& Notes
MUSI 255

Credits: 1

## MUSI 389 - Applied Composition

Compositional techniques relative to the student's interest will be studied through an analysis of works by major composers. Although no definite idiom is prescribed, contemporary techniques are encouraged. May be repeated for up to three credits.

## Prerequisites \& Notes

MUSI 255 or permission of the instructor
Credits: 1

## MUSI 391 - Applied Electronic Composition

A course designed to present the elements involved in electronic composition. The student will compose using magnetic tape, computer, and synthesizer. Course may be repeated for up to 3 credits.

## Prerequisites \& Notes <br> MUSI 255 or 352

## Credits: 1

## MUSI 409 - Jazz Combo

Students will meet weekley with the appropriate faculty member to work on jazz performance in the small group (combo) setting. Study of phrasing, articulation, jazz theory, improvisation, and other jazz performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 413 - Saxophone Quartet

Students will meet weekly with the appropriate faculty member to work on literature selected for their performance ability level. Study of phrasing, articulation, balance, blend, intonation, and other performance practices will be addressed. Students will be auditioned at the beginning of the semester for placement. At least one public performance will be given per semester. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 414 - Symphonic Wind Ensemble

A chamber ensemble composed of select musicians chosen by audition, performing contemporary literature as well as transcriptions for winds and percussion. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Prerequisites \& Notes

Audition with the director of the Symphonic Wind Ensemble and the instrumental faculty

Credits: 1

## MUSI 415 - Concert Choir

Approximately 50 men and women, chosen by audition, to study and perform the great choral literature from the Renaissance to the present. Concerts are presented on campus and on tours. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 416 - Choral Ensemble

A large ensemble chosen by audition to study and perform the great choral literature. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 417 - Chamber Singers

A selected small ensemble of well-blended voices appropriate for the performance of madrigals and other chamber vocal music. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 418 - Marching Pride

The Marching Pride performs during the half time at football games, both home and away, and for other special events. Much of its music is specially arranged. Open to all students. Six hours a week rehearsal during the football season. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 419 - Concert Band

The Concert Band members are carefully selected to provide a balanced instrumentation of the best players. Music written for concert band is the main repertoire. Concerts on campus. Six hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 420 - Jazz Ensemble

The SRU Jazz Ensemble performs jazz literature from all eras of jazz history including big band, bop, hard bop, fusion and contemporary. This ensemble often performs with guest artists of national and international stature, both on and off campus. Membership in this ensemble requires an audition. Four and one-half hours of rehearsal per week. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 421 - Orchestra

The orchestra is a string ensemble, with winds and percussion added when needed, which performs music from the orchestral repertoire. Admission by audition. Two and one-half hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

## Credits: 1

## MUSI 422 - Chamber String Ensemble

The Chamber String Ensemble is a small ensemble selected for the study and performance of chamber music written for strings. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 423 - Brass Ensemble

The university's Brass Ensemble is a select ensemble of brass (and percussion) players who study and perform music from all historical periods. Both large brass choir works and small chamber brass works are performed. The ensemble performs on and off campus. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 424 - Woodwind Ensemble

The Woodwind Ensemble is a small select ensemble of woodwind players who study and perform music for woodwinds from all historical periods. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 425 - Percussion

This small select ensemble of percussionists studies and performs music composed and transcribed for both percussion and mallet ensembles. Three hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 426 - Flute Choir

The SRU Flute Choir is made up of a select group of flutists who will rehearse and perform a variety of music written for flute ensemble. Audition required. Two hours a week rehearsal time. One credit for every semester of satisfactory participation is granted for this music performance group, with a maximum allowance of ten credits in any one music organization. Additional credits are possible with a waiver from the departmental chairperson. The ensemble is also available without credit.

Credits: 1

## MUSI 428 - Music Therapy Practicum

Seminar and practical experience in clinical supervision.

## Prerequisites \& Notes

MUSI 327, 330

Credits: 3

## MUSI 431 - Pedagogy

Acquaintance with the philosophy, theories, techniques, materials, and practical applications of teaching applied music on the student's major instrument of study. Laboratory experience under the supervision of the instructor will be an integral part of the course.

## Prerequisites \& Notes

Four semesters of applied major lessons or the equivalent

Credits: 1

## MUSI 432 - Clinical Integration

A supervised clinical experience allowing the music therapy student practical experience in a variety of community health care agencies and educational settings.

Prerequisites \& Notes
MUSI 330

Credits: 0/1

## MUSI 433 - Clinical Integration

A supervised clinical experience allowing the music therapy student practical experience in a variety of community health care agencies and educational settings.

## Prerequisites \& Notes

The student may enroll in this course only when five semesters of music therapy field experience have successfully been completed and with permission of the instructor

Credits: 1

## MUSI 440 - Music Therapy for Adult Clients

Application of music therapy techniques and materials in all areas of mental health, corrections, and special education. Emphasis is placed on adult populations and group dynamics.

## Prerequisites \& Notes

MUSI 312, 432 or permission of the instructor and PSYC 276

Credits: 3

## MUSI 450 - Music Therapy Internship

A continuous six-month internship in an approved music therapy program under the direction of a Board Certified Music Therapist. Required of all candidates for graduation.

## Prerequisites \& Notes

All coursework must be completed

Credits: 3 to 12

## MUSI 455 - Student Teaching - Music

Under the guidance of a cooperating teacher and university supervisor, students engage in two eight-week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

## Prerequisites \& Notes

All program coursework must be completed

Credits: 12, 6, 3

## MUSI 465 - Applied Performance Voice

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $165,265,365$ may each be taken two times for a total of 18 credits; MUSI 465 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 466 - Applied Performance Piano

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 166, 266, 366 may each be taken two times for a total of 18 credits; MUSI 466 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 467 - Applied Performance Strings

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 167, 267, 367 may each be taken two times for a total of 18 credits; MUSI 467 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 468 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $168,268,368$ may be taken two times for a total of 18 credits; MUSI 468 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 469 - Applied Performance Brass

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI $169,269,369$ may each be taken two times for a total of 18 credits; MUSI 469 may be taken four times for a total of 12 credits.

## Prerequisites \& Notes

Audition

Credits: 3

## MUSI 470 - Applied Performance

Applied lessons for the Bachelor of Music in Performance student. One lesson and 15 hours of practice each week are required for three credits. Applied lessons beyond degree requirements will be granted upon faculty availability. MUSI 170,270 and 370 may each be taken two times for a total of 18 credits; MUSI 470 may be taken four times for a total of 12 credits.

Prerequisites \& Notes
Audition
Credits: 3

## MUSI 473 - History of Music III

This course examines the musical events from approximately 1890 to the present. Lectures, readings, performances and listening sessions develop the students' musical understanding of the period. A reading knowledge of music is essential.

## Prerequisites \& Notes

MUSI 101 or permission of the instructor

Credits: 3

## MUSI 479 - Applied Piano

With the approval of the applied music teacher, lessons are available in standard piano. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 481 - Applied Voice

With the approval of the applied music teacher, lessons are available in standard voice. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 482 - Applied Strings

With the approval of the applied music teacher, lessons are available in standard string instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 483 - Applied Brass

With the approval of the applied music teacher, lessons are available in standard brass instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 484 - Applied Woodwinds

With the approval of the applied music teacher, lessons are available in standard woodwind instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 485 - Applied Percussion

With the approval of the applied music teacher, lessons are available in standard percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week
are required.

Credits: 1

## MUSI 486 - Applied Music

With the approval of the applied music teacher, lessons are available in piano, voice, and any of the standard string, brass, woodwind or percussion instruments. Materials studied will depend on the students' background and ability. Normally one lesson and five hours of practice each week are required.

Credits: 1

## MUSI 487 - Applied Counterpoint I

This study and practice of writing music according to contrapuntal theory of the 16 th century. Course may be repeated for up to 3 credits.

Prerequisites \& Notes
MUSI 255

Credits: 1

## MUSI 488 - Applied Counterpoint II

The study and practice of writing music according to contrapuntal theory of the 18th century. Course may be repeated for up to 3 credits.

## Prerequisites \& Notes

MUSI 255

Credits: 1

## MUSI 489- Applied Composition

Compositional techniques relative to the student's interest will be studied through an analysis of works by major composers. Although no definite idiom is prescribed, contemporary techniques are encouraged. May be repeated for up to three credits.

## Prerequisites \& Notes

MUSI 255 or permission of the instructor

Credits: 1

## MUSI 490 - Independent Study

Students have an opportunity to study selected areas in greater concentration under the direction of a music faculty.

## Prerequisites \& Notes

permission of the instructor, departmental chairperson and dean of the college where the study will be conducted
Credits: 1 to 3

## MUSI 491 - Applied Electronic Composition

A course designed to present the elements involved in electronic composition. The student will compose using magnetic tape, computer, and synthesizer. Course may be repeated for up to 3 credits.

## Prerequisites \& Notes

MUSI 255 or 352

Credits: 1

## MUSI 499-Applied Recital

The purpose of this course is to give the performance majors an opportunity to perform a full recital on their major instrument. It will be taken in addition to study in the student's major applied area. Course may be repeated up to two credits.

Credits: 1

## NURS 311 - Introduction to Health Care Informatics

This course is designed to provide students with an opportunity to apply knowledge and skills from information science and computer science to the health care field. Emphasis will be on developing a basic understanding of how automation is used to manage information in healthcare. Topics covered include types of information systems used in healthcare, how to select and implement information systems, current developments in healthcare information systems, issues surrounding computers in health care. In this course the focus is on the computer as a tool for helping healthcare providers do their work.

## Prerequisites \& Notes

Elective CPSC 110 or 210 or Microcomputer Proficiency Exam or by permission of the faculty

Credits: 3

## NURS 312 - Nursing in Transition

Nursing 312 examines professional role socialization from a historic, contemporary, and futuristic view. It enables the student to develop communication and technology skills necessary for success in a collegiate nursing program.

## Prerequisites \& Notes

Admission into the BSN program

Credits: 3

## NURS 313 - Health Assessment and Promotion/Clinical

This clinical course enables the student to become skilled in assessing the many parameters that influence a client's status and behavior. Students will integrate client health dimensions including physiological, developmental, psychosocial and socio-cultural-religious assessments as a basis for formulating nursing diagnoses.

## Prerequisites \& Notes

NURS 312, eligibility for advanced standing and junior level

Credits: 3

## NURS 314 - Health Assessment and Promotion/Clinical

This clinical course enables the student to become skilled in assessing the many parameters that influence a client's status and behavior. Students will integrate client health dimensions including physiological, developmental, psychosocial and socio-cultural-religious assessments as a basis for formulating nursing diagnoses.

## Prerequisites \& Notes

NURS 312, eligibility for advanced standing and junior level
Credits: 3

## NURS 322 - The Teaching-Learning Process in Nursing

This course is designed for the registered nurse who desires greater knowledge and skill in assisting individuals, families, and groups to acquire health-related knowledge, skills, and values. The course provides opportunities from a conceptual and practical perspective to explore the dynamics that contribute to effective health education. Emphasis will be placed upon developing the nurses' abilities, confidence, and self-image as teachers.

Credits: 3

## NURS 327/328 - Group Process in Nursing and Health Care/Clinical

Provides opportunities to develop leadership skills with groups for the purposes of maintaining, regaining or improving their levels of wellness. The focus is on the group as a system. Combined conceptual knowledge and practical skills needed to work effectively with health-related groups will be taught.

Prerequisites \& Notes
Pre/Co-requisites: NURS 313/314, 322

Credits: 3

## NURS 329/330 - Nursing Process in the Home Health Care Setting

This elective course examines home health care and the necessary modifications and strategies needed for successfully caring for clients in their homes. Clinical experience is an integral part of the course.

## Prerequisites \& Notes

NURS 313/314

Credits: 3

## NURS 395 - Workshop

All academic departments list this workshop course. Please contact the individual department for more information.
Credits: 3

NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical

This course prepares students to understand managed health care delivery systems and their impact of delivery and practice patterns with emphasis on the delivery of nursing care.

## Prerequisites \& Notes

Pre/Co-requisites: NURS 313/314

Credits: 3

## NURS 412/413 - Nursing Process with School

This elective course examines in-depth the role of the nurse with clients in the school setting. The course focuses on the student in relation to the school/family/community environment and explores the nurses' responsibility for enhancing the students' capability for learning in relation to restoration, promotion, and maintenance of health and development.

## Prerequisites \& Notes

NURS 313/314 or equivalent

Credits: 6

## NURS 415 - Management of School Health Services by School Nurses

This elective course enables school nurses to work within the school organization and the community to effectively manage school health services.

## Prerequisites \& Notes

Enrollment in BSN program or permission of the instructor

Credits: 3

## NURS 416/417 - Case Management in Nursing

This course is designed to prepare students to utilize the case management model to deliver professional nursing care.
Prerequisites \& Notes
Pre/Co-requisites: Nurs 313/314
Credits: 3

## NURS 422 - Nursing Research

This course examines in-depth the role of research in the development and refinement of the nursing process and its relationship and contribution to the development of nursing science. The student becomes a more critical consumer of nursing research by developing beginning understanding of the principles associated with each major step of the research process and applying these to a group research exercise. Students conduct a computer-assisted search of the literature as well as to apply the concepts derived from beginning statistics.

## Prerequisites \& Notes

NURS 313, 324, SASW 317 and senior standing
Credits: 3

## NURS 426/427-Community Health Nursing/Clinical

In this course, the focus is on the community as the client. Students use the nursing process to assess, plan, implement, and evaluate nursing care for populations and communities. Theories, models, and concepts from community and public health nursing including epidemiology are used as a basis for each step of the nursing process.

Credits: 3

## NURS 429 - Financial Management for Nursing Care Managers

This course provides students with content related to current issues, tools (i.e. Excel spreadsheet), and regulation necessary to function as a nursing case manager.

Credits: 3

## NURS 450 - Health Care Informatics Internship

Provides opportunity to apply theory and develop competencies in health care informatics through a work-related experience in an appropriate health related enterprise.

## Prerequisites \& Notes

Cumulative and major QPA 2.500 and approval of minor or certificate advisor
Credits: 3

## NURS 498 - Selected Topics

Elective nursing courses whose purpose is to deepen or broaden the student's perspective on aspects of professional nursing practice. Each course includes an exploration of nursing roles and nursing research related to such topics as: Trends in Nursing Care of Children, Nursing Care of the Older Adult, Nursing and Contemporary Women's Health Issues.

Credits: 3

## NURS 510 - Cardiovascular Function: Assessment and Treatment

Emphasis is placed upon the pathophysiological changes in coronary artery disease and the major mechanisms used to diagnose, monitor, and treat the alterations. Normal and abnormal EKG interpretation and medical and surgical management are presented. The role of a health team approach is addressed.

## Prerequisites \& Notes

Human Anatomy and Physciology or permission of the instructor

Credits: 3

## NURS 511 - Advanced Healthcare Informatics

This course is designed to provide students with an in-depth analysis of healthcare informatics. Emphasis will be on developing a comprehensive under-standing of the use of information systems in health care. Topics covered include health care data, information and knowledge, health care classifications and coding systems, and use of ethical and legal principles with information systems. In this course the focus is on applying computer, information, and health
care concepts to real world problems in health care.

## Prerequisites \& Notes

NURS 311 or permission of the instructor

Credits: 3

## NURS 595 - Workshop

All academic departments list the workshop course. Please contact the individual department for more information.

Credits: 3

## PE 106 - Gymnastics Fundamentals

This course is based on a study of developmentally appropriate gymnastics. An emphasis will be placed on an educational gymnastics approach, utilizing movement concepts appropriate for teaching children body awareness and body control. Students will also learn skill progressions, spotting techniques, and biomechanical principles involved in a variety of gymnastic skills performed on traditional and non-traditional gymnastics equipment. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 107 - Aquatic Fundamentals

This course is designed to provide the student with an overview of a variety of aquatic activities. Consideration is given to basic swimming strokes, starts and turns, small craft safety, skin diving, elementary non-swimming rescue techniques, diving progressions from the deck, springboard diving, synchronized swimming, water polo, personal fitness, and aquatic games. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

American Red Cross Level III swimmer

Credits: 3

## PE 110 - Strength/Resistance Training

Designed to provide practical knowledge to effectively design an individualized weight training and/or body building program. Specific emphasis will focus on strength training principles, safety procedures, equipment, and individualized programming. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 113-Golf

This course is designed to introduce the student to all phases of golf through application of the skills used in these activities. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

This course provides an opportunity to acquire the basic knowledge, etiquette, skill and rules in the game of racquetball. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 133 - Tai Chi Chuan: Chinese Classical Exercise

An introduction to the Chinese Classical Exercise System inspired by the Chinese "Book of Changes." Tai Chi Chuan concentrates on relaxed movement, proper breathing and attention to posture. Any age or physical performance level may participate. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 140 - Downhill Snow Skiing I

This course students to acquire a basic knowledge and appreciation of skiing as a sport and as a life-time leisure activity. Safety procedures and skiing etiquette also are discussed. Instruction takes place at Peek N' Peak Ski Resort. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 141 - Personal Physical Fitness

This course provides students the opportunity for individual assessment and exercise programs to improve and/or maintain physical fitness and weight control. Principles involved with the maintenance of physical fitness, weight control, diets, and the aging process will be provided through lecture. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 149-Tennis

This course teaches basic fundamentals. The rules, regulations, and history of tennis also will be covered, along with strategies of the single and double games. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 152 - Practical Introduction to Teaching Physical Education

This course is an orientation to the art and the science of teaching physical education. Students will learn about the teaching styles and strategies that lead to effective organization and management in physical education classes. Required field experiences give students the opportunity to observe learner characteristics, student behavior, teaching functions, and the teaching effectiveness of professional teachers. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 154 - Volleyball

This course is designed for students to acquire the fundamental skills of volleyball. Techniques, rules, and strategies of the game will be emphasized. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 181 - Adventures in Backpacking

This course teaches the basic knowledge and skills of backpacking travel in a temperate environment. Techniques such as how to use and to carry a backpack, hiking skills including route selection and trail negotiation with a pack, map, and compass techniques, knowledge and care of backpacking equipment, planning backpacking trips, and environmentally sound backpacking skills will be covered. The course includes a mandatory weekend trip to put skills to practical use. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 182 - Introduction to Rock Climbing

Introduces students to the fundamental skills of rock climbing. Beginning skills in belaying, static climbing, rappelling, prussiking and artificial wall climbing safety considerations will be covered. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 184 - Adventure Games

This course is designed to provide physical activity and direct experience in adventure challenges requiring selfdiscipline, willingness to try, and personal commitment. Coursework includes physical fitness and flexibility exercises, aerobic games, cooperative games and nongames, group initiatives, trust activities, and challenge course low and high elements involving perceived physical and psychological risk and challenges. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 186-Cross Country Skiing

This course teaches the fundamental knowledge and skills of classical cross country skiing and touring, including waxing and equipment care. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 187 - Flatwater Canoe Tripping

This course teaches the basic skills and concepts of flatwater canoe camping, such as how to enter and to exit a canoe, tandem paddling techniques, canoe safety, and canoe portaging. Students will also learn basic canoe camping skills, including food planning, how to use camping equipment, and minimum impact camping techniques. Students will participate in a mandatory weekend canoe camping experience to put learned skills to practical use. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 188 - Sailing

This course offers students an opportunity to develop skills, to learn techniques, and to achieve personal satisfaction in beginning sailing. The course also involves the knowledge and application of the rules of water safety to the sport of sailing. This class is designed for beginners. At its conclusion students will be able to enjoy sailing as a lifetime recreational sport. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 2

## PE 189 - Basic Canoeing

Instruction focuses on the fundamental skills and concepts needed to operate a canoe effectively and safely. Basic skills, such as how to enter and exit a canoe, canoe safety, and tandem paddling techniques, are discussed. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 191 - Foundations of Physical Education

This course is designed to introduce the student majoring in physical education teacher education to the historical, philosophical, cultural and sociological influences that have shaped the profession of teaching physical education. A foundational perspective will be taken to clarify the related disciplines, history, and current issues of physical education and of education, from the ancient cultures to the 21 st century. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 2

## PE 192 - Diversity Issues in Physical Education

This course will explore differences among students within a variety of physical education settings. Students will learn about other people and explore how others view participation in physical activity and exercise. This course will help students become sensitive to and appreciate the diversity of others, thus, demonstrating responsible social behaviors that will enable them to interact in a positive manner with diverse groups within the physical education enrichment. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 2

## PE 202 - Technology for Physical Education Teacher Education

This purpose of this course is to familiarize and enhance physical education major's technology skills to support instruction in a K-12 setting. The course includes personal computer use in creating materials to enhance instruction and aid in assessment. Also included are other technologies, such as personal digital assistants (PDAs), heart rate monitors and digital cameras/camcorders, in addition to various physical education software and Internet options. A portion of the course will be conducted online using Blackboard. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 240 - Downhill Snow Skiing II

Advanced techniques of downhill skiing are presented. Instruction takes place at Peek N' Peak Resort. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 241-Outdoor Pursuits

This course is designed to introduce the student majoring in physical education teacher education to the varied but interrelated topics of outdoor pursuits, adventure programming, experiential education, and new games philosophy as they relate to physical education and recreation programming. The course will provide physical activity, direct experience, and leadership techniques in adventure challenges which require self-discipline, a willingness to try, and personal commitment. A weekend overnight backpacking/camping experience is required. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 242 - Fitness Education

This course is designed to provide practical knowledge and skills to develop, organize, and administer age appropriate health-related fitness education programs for youth and adolescents including muscular strength, endurance, flexibility, body composition and cardiovascular endurance activities. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

PE 141
Credits: 3

## PE 243-Movement Education

This course helps students achieve a self-mastery in the fundamental areas of educational gymnastics, educational games, and educational/creative dance. It is also designed to show the student how movement education relates to an individual child's personal development - intellectually, emotionally, socially, and physically. Reflections (metacognition) written on lesson plans, an emphasis on peer teaching, and interdisciplinary connections through various stimuli are also explored. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 2

## PE 246 - Intermediate Swimming

This course provides students with the opportunity to learn elements of good swimming and aquatic skills. Personal and safety skills will also be emphasized. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 263 - Lifeguarding

The lifeguarding course is designed to provide lifeguard candidates with skills and knowledge necessary to keep patrons of aquatic facilities safe in and around water. This course includes techniques wiht aquatic-specific first aid and cardiopulmonary resuscitation (CPR) training, Automated External Defibrillation, Oxygen Administration and training in specific water environments.

Credits: 3

## PE 270-Psychological and Sociological Bases of Sport

This course provides students with an understanding of the relationships between sport and various psychological and sociological factors. This is a Theory and Technique Course (open to Physical Education majors only).

Prerequisites \& Notes
PESM 194

Credits: 3

## PE 274 - Assessment Strategies in Physical Education

This course content is designed to give the student an understanding of assessment techniques used in physical education. Students will learn the various techniques used for assessing as applied in the public school setting. Students will have the opportunity to use several of the computer applications related to physical education. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 289 - Advanced Canoeing

This course teaches students the advanced skills and techniques of canoeing. Safety instruction is emphasized. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 301 - Sports Officiating

This course covers officiating methods and rule interpretations. Opportunities are provided for practical experience in officiating. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 1

## PE 348 - Aquatic Leadership

This course is designed to prepare students for leadership responsibilities in the field of aquatics. Program development, facility operation, risk management, and staff management will be included in this course.

## Prerequisites \& Notes

Water Safety Instructor Certification

Credits: 2

## PE 349 - Skin and Scuba Diving

This course provides students with the opportunity to learn a wide variety of skin and scuba diving skills, including rescue techniques. In addition, emphasis will be placed upon the following: 1) selection, care, and use of diving equipment, 2) physical and biological aspects of various diving environments, 3 ) first aid as applied to scuba diving, including cardio-pulmonary resuscitation, and 4) aspects of physics, physiology, and medicine related to the diver's performance in the water. This is a Wellness and Lifetime Activity Course (offered to all students).

Credits: 1

## PE 352 - Secondary Physical Education Teaching Methods

Designed as a third level pedagogy class. This course offers "in-depth" continuation of the study and application of effective teaching and learning in the secondary physical education classroom. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

PESM 252, 274 and acceptance to teaching certification
Credits: 3

## PE 356 - Net/Wall Activities and Games

This course is designed to introduce the student to games and skills associated with a variety of racquet activities and games, which will include tennis, badminton, racquetball, volleyball, and table tennis. Emphasis will be placed on planning and applying developmentally appropriate activities for all learners. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 357 - Territory Activities and Games

This course is designed to introduce the student to the games and skills associated with a variety of territory activities and games, which will include flag football, basketball, hockey and soccer. Emphasis will be placed on planning and applying developmentally appropriate activities for all learners.

Credits: 3

## PE 358 - Lifetime/Leisure Activities and Games

This course is designed to introduce the student to the games and skills associated with a variety of striking/fielding activities, which will include golf, bowling and archery. Emphasis will be placed on planning and applying developmentally appropriate activities for all learners. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 359 - Striking/Fielding Activities and Games

This course is designed to introduce the student to the games and skills associated with a variety of striking/fielding activities, which will include softball, cricket, and rounders. Emphasis will be placed on planning and applying developmentally appropriate activities for all learners. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 2

## PE 363 - Lifeguarding Instructor

The purpose of the Lifeguarding Instructor course is to train instructor candidates to teach lifeguard training, first aid, lifeguard management, CPR for the professional rescurer, AED essentials, oxygen administration for the professional rescuer, preventing disease transmission, community water safety, and basic water rescue. The training in this instructor course prepares instructor candidates by developing their understanding of how to use course materials, how to conduct training sessions, and how to evaluate participants' progress.

Credits: 3

## PE 369 - Philosophy and Psychology of Coaching

This course emphasizes the relationships involved in the association of the coach with the administration, student body, players, press and community. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 3

## PE 383 - Motor Development and Learning

This course introduces the student to the factors influencing the changes in the development and learning of motor skills from infancy to adolescence. Practical laboratory activities are utilized to illustrate basic concepts of motor development and motor learning. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

CDEV 248 and admission to teacher certification

Credits: 3

## PE 446 - Water Safety Instruction

The purpose of this instructor course is to train instructor candidates to teach American Red Cross Swimming and Water Safety courses. It is a certification course for American Red Cross Water Safety Instructor (WSI).

## Prerequisites \& Notes

PE 107 or permission of instructor.

Credits: 3

## PE 452 - Elementary Physical Education Methods

This course is designed to prepare the student to become an effective teacher through the practice of planning, implementing and evaluation the teaching-learning process at the elementary school level. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

PE 352

Credits: 3

## PE 455 - Student Teaching - Physical Education

Under the guidance of a cooperating teacher and university supervisor, students in this course engage in two eightweek assignments on a full-time basis in specified school districts and attend scheduled seminars. Additional
assignments required. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

PE 452

Credits: 12

## PE 468 - Senior Seminar in Physical and Health Education Teacher Education

This course is designed to provide a capstone overview of the organization, management and application of physical education and health instructional and extra-class programs. Content focuses on current issues and trends in the discipline. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

PE 352 and admission to teacher certification

Credits: 2

## PE 490 - Independent Study

With the approval of the students' advisors and departmental chairperson, students may pursue an individual project in physical education especially suited to meet the students' needs. This is a Theory and Technique Course (open to Physical Education majors only).

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and Dean of the college where the study will be conducted.

Credits: 1 to 3

## PE 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor. This is a Theory and Technique Course (open to Physical Education majors only).

Credits: 1 to 3

## PHIL 101 - Introduction to Philosophy

A first encounter with the nature and methods of philosophical thinking in which a person's view of his/her own nature and of the world becomes challenged, explored and deepened.

Credits: 3

## PHIL 113 - Introduction to Logic

A study of the nature of conceptual thinking, including the role of language, formal and informal fallacies, truth tables, and elementary techniques of modern logical analysis in order to improve the student's skill in reasoning.

Credits: 3

## PHIL 123-Ethics

An introduction to the study of questions concerning right action, moral obligation, and an examination of various theories of moral judgment.

Credits: 3

## PHIL 140 - World Religions

An examination of the beliefs and practices of the principle religions of the world, which may include Hinduism, Buddhism, Jainism, Sikhism, Taoism, Shintoism, Confucianism, Zoroastrianism, Islam, Judaism, and Christianity, as well as some of the representative "archaic" religions of the world.

Credits: 3

## PHIL 163-Philosophy in Literature

An examination and discussion of the philosophical content of poetry and prose of outstanding literary and philosophical merit.

Credits: 3

## PHIL 170-American Philosophy

An investigation of the historical genesis of American culture through a reading of the prominent philosophical literature the culture has produced.

Credits: 3

## PHIL 171 - Philosophy of Human Existence

An investigation into and discussion of the central themes of existential philosophy. Philosophers such as Kierkegaard and Nietzsche will be studied in terms of their retrieval of the meaning of human existence.

Credits: 3

## PHIL 261 - Philosophy of Art

Exploration of basic issues and philosophical views of the experience of the arts. This course aims at the understanding and enhancement of the experience of the arts, and at a thoughtful appraisal of the role of art in life.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 313 - Symbolic Logic

An advanced investigation of logical thought through the use of special techniques of symbolization, the logic of unquantified and quantified propositions, the nature and limits of logical systems and the foundation of mathematics
are some of the important topics considered.

## Prerequisites \& Notes

Logic or Algebra

Credits: 3

## PHIL 324 - Environmental Ethics

An analysis of environmental issues using a philosophical understanding of nature, with a consideration of the ethical responsibilities in the use of the earth's resources, behavior toward non-human species, and obligations toward future generations.

Credits: 3

## PHIL 325 - Medical/Health Care Ethics

A course in applied ethics about conceptual, ethical, and legal dilemmas in the institutional rights of patients, in the responsibilities of practitioners, in technological challenges to values in the modern age in caring for the seriously ill and the dying, and in rationing health care in a large society.

## Prerequisites \& Notes

Prefer to ahave students with background in health care fields, social and behavioral sciences, life sciences, pre-law, pre-med and philosophy

Credits: 3

## PHIL 326 - Business Ethics

A study of applied ethics about the conceptual and ethical dilemmas in the business professions. An examination of cultural challenges of social and moral responsibility in a technically sophisticated economic climate.

## Prerequisites \& Notes

Prefer students with background in business, accounting, management, marketing, finance, economics, communication and pre-law

Credits: 3

## PHIL 331 - Social and Political Philosophy

An in-depth study of central concepts and issues in social and political thought.

## Prerequisites \& Notes

Prefer students with background in history, philosophy, pre-law, psychology, government and public affairs and sociology

Credits: 3

## PHIL 335 - Philosophy of Law and Justice

A study of multiple theories of law and the nature of law's relation to justice with special emphasis on a notion of justice for institutions.

## Prerequisites \& Notes

Prefer students with background in communication, hisotry, philosophy, pre-law, government and public affairs and sociology

Credits: 3

## PHIL 341 - Philosophy of Religion

A critical inquiry into the nature and validity of religious belief and experience, its unity and variety, its relation to other human interests.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 343 - Oriental Religious and Philosophical Thought

An investigation of the central religions and philosophical ideas of Oriental cultures, focusing primarily on the cultures of India, China, Japan and Southeast Asia.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 351 - Philosophy of Natural Science

An in-depth examination of the nature of natural science, including its aims, methods, central concepts, and limits and a thoughtful appraisal of its significance for the modern age.

## Prerequisites \& Notes

Two college-level courses in Natural Sciences and Mathematics

Credits: 3

## PHIL 353 - Mysticism and Psychical Research

A philosophical assessment of the methods, findings, and significance of investigations into phenomena referred to as "paranormal," including ESP, psychokinesis, survival of death, and mystical experience. Intensive writing.

Credits: 3

## PHIL 371 - History of Western Philosophy I

A study of major Western philosophers and philosophical issues from the ancient period and extending into the medieval period, designed to show how basic questions and concepts grew and how the works of these periods continue to provide insight and inspiration.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 372 - History of Western Philosophy II

A study of Western philosophy from the Renaissance through the beginning of the 19th century, tracing the basic concepts and problems of this period and showing how its thinkers continue to stimulate thought.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 373 - Modern Authors and Issues

Variable content within the modern contemporary period of philosophical thinking. Repeatable to 6 credits.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 375-Existentialism and Phenomenology

A study of important twentieth century philosophers in terms of their attempt to establish a new approach to philosophy and their reaction and attempt to overcome "Western metaphysics."

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor
Credits: 3

## PHIL 376 - Analytic Philosophy

An examination of the development and influence of Anglo-American analytic philosophy in the twentieth century. The focus will be on how analytic philosophers have used logic, the analysis of language, and scientific methodology in approaching traditional philosophical questions.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3

## PHIL 490 - Independent Study

A special course designed primarily for students seeking knowledge in philosophy beyond course offerings. The student's interests, in consultation with department members, determines the topics covered.

## Prerequisites \& Notes

15 credits in Philosophy or permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 6

## PHIL 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

## Prerequisites \& Notes

One course in Philosophy or permission of the instructor

Credits: 3 to 6

## PHYS 101-Concepts of Science I

A descriptive and conceptual course in physics designed for the non-science major. Topics are selected from light, sound, motion, and astronomy to develop a necessary scientific attitude and background for today's society. There are two lectures and one-two hour laboratory per week.

Credits: 3

## PHYS 102 - Concepts of Science II

A descriptive and conceptual course in physics designed for the non-science major to study energy systems. Topics are selected from heat, electricity, magnetism, and the structure of matter and modern areas of physics, such as lasers, Xrays, and nuclear energy. The purpose of the course is to develop a positive scientific attitude and background for today's society. No laboratory.

Credits: 3

## PHYS 103 - Investigating Matter and Energy

This is an activity-based and discussion-oriented course designed for the non-science major. The topics of light, matter, heat, and electricity have been selected to help students develop meaningful understanding of some powerful ideas that they can apply to a wide variety of interesting phenomena. Laboratory credit is given for taking this liberal studies enrichment course.

Credits: 3

## PHYS 140 - Engineering Graphics I

A beginning laboratory course in technological design and drawing. Topics: lettering, scales, geometric construction, orthographic sketching, and auxiliary views.

Credits: 2

## PHYS 141 - Engineering Graphics II

An advanced laboratory course in technological drawing and implementation. Topics: Vectors, graphing, nomography, isometric pictorials, technical illustration, computer graphics, and working drawings.

## Prerequisites \& Notes <br> PHYS 140

Credits: 1

## PHYS 201 - Elements of Physics I

Introduction to physics considering mechanics, heat, techniques of motion study and equilibrium study. Especially designed for physical education or physical therapy majors. Includes a lab.

Credits: 3

## PHYS 202 - Elements of Physics II

A course designed to meet the physics needs of students at a non-calculus level. Application of physical principles to the life sciences is stressed. Topics in optics, electricity, heat, fluids, modern physics, and radiation are emphasized. Includes a lab.

Prerequisites \& Notes
PHYS 201

Credits: 5

## PHYS 204 - Environmental Biophysics

An introductory course covering the energy problem and alternative solutions; radiation and its effects on man; the eye and vision; the ear, hearing and noise pollution; electrical power production alternatives and the environmental costs; some instruments used in biophysics and medicine.

Credits: 3

## PHYS 211 - General Physics I

Introduction to physics using calculus and including extensive problem solving. Topics include mechanics statics, kinematics, kinetics, work-energy, rotational motion, and impulse-momentum. Includes a lab.

## Prerequisites \& Notes

Co-requisite: MATH 225

Credits: 4

## PHYS 212 - General Physics II

This is a calculus based course, which follows PHYS 211. It develops the concepts of electric and magnetic fields. Topics covered are Gauss' Law, Ampere's Law, Biot's Law, Faraday's Law, electric charges and their dynamics, capacitance, resistance inductance, etc. Offered fall semester only. Includes a lab.

## Prerequisites \& Notes

Credits: 4

## PHYS 213-General Physics III

Covers fluids, hydrostatics and hydro-dynamics, heat transfer and measurements, laws of thermodynamics, vibrating bodies, wave motion, light lenses and optical instruments, interference and diffraction, polarization. Includes a lab. Offered spring term only.

Prerequisites \& Notes
PHYS 211

Credits: 3

## PHYS 271-Astronomy

This course is designed for the general student. Recent findings in astronomy are discussed, i.e., black holes, quasars, etc. Other topics of interest are the evolution of stars, galaxies, and the universe since the big bang. No math required.

Credits: 3

## PHYS 301 - Physical Chemistry I

Thermodynamics as applied to chemical and physical systems. Cross-listed with CHEM 301.
Prerequisites \& Notes
CHEM 108, 112, PHYS 212 or 213 and MATH 230

Credits: 3

## PHYS 314 - Engineering Mechanics I: Statics

Includes the application of equilibrium conditions to structures, trusses, frames and machines, and beams with concentrated and distributed loads.

## Prerequisites \& Notes

PHYS 212; Co-requisite: MATH 240
Credits: 3

## PHYS 315 - Engineering Mechanics II: Dynamics

Integrates the subject content of kinematics and kinetics that deal respectively with the description of motion of bodies and the causes for their motion.

## Prerequisites \& Notes

PHYS 314, MATH 301

Credits: 3

## PHYS 317 - Space Science

Introductory course in space exploration. It emphasizes the evolution of the earth with respect to its neighbors in the solar system. Other topics covered are the earth's ionosphere, magnetosphere, hazards of satellite communication, and orbital dynamics.

## Prerequisites \& Notes

Advanced standing, completion of one course in Natural Science and Mathematics and two years of high school Algebra or its equivalent

Credits: 3

## PHYS 325-Analog \& Digital Electronics

An introductory analog and digital electronics course designed primarily for science students. The course will start with an analysis of AC and DC circuits using Kirchhoff's laws and complex numbers. The analog part will include a study of discrete components including diodes, transistors, and SCRs as well as linear integrated circuits. The digital part will include basic gates as well as MSI and LSI circuits and will be center around interfacing computers to experiments.

## Prerequisites \& Notes

PHYS 212 or permission of the instructor
Credits: 3

## PHYS 331 - Mathematical Methods of Physics

Applications in physical science and engineering of the following: vector analysis, complex variables, Fourier and Laplace transforms, linear algebra, and some boundary value problems. Cross-linked as MATH 331. This course may be counted as a physics course or as a mathematics course, but not both.

## Prerequisites \& Notes

PHYS 211 and MATH 240; Co-requisite: MATH 231

Credits: 3

## PHYS 371 - Physical Optics

This is a physical optics course dealing with the nature and transmission of light. Topics covered will include the propagation of light, coherence, interference, diffraction, Maxwell's Equations, optics of solids, thermal radiation, optical spectra and lasers.

## Prerequisites \& Notes

PHYS 212, 213

Credits: 3

## PHYS 381 - Advanced Physics Laboratory

Selected experiments in all branches of physics that are of a more advanced grade than those given at the general or intermediate level. Each experiment will be an extended piece of careful, thorough work, culminating in a detailed report.

## Prerequisites \& Notes

PHYS 211, 212, 213 and junior standing

Credits: 2

## PHYS 382-Optics Laboratory

This course will provide in depth experience in laboratory techniques, data acquisition and analysis in the field of Opital Physics. Experiments are of a more advanced grade than those given at the general or intermediate level. Each experiement will be an exptended piece of careful, thorough work, culminating in a detailed report. Appropriate for students majoring in the Biological, Earth, Environmental, Health, Mathematicsl and Physical sciences.

## Prerequisites \& Notes

PHYS, 211, 212, 213 or 201 and 202, a course in calculus and junior standing or permission of the instructor

Credits: 2

## PHYS 410 - Electricity and Magnetism

Electric fields and potentials of charge distributions and polarized materials, magnetic fields and vector potentials of current distributions and magnetized materials; electric and magnetic energies and application of Maxwell's equations.

## Prerequisites \& Notes

PHYS 212, 331

Credits: 3

## PHYS 411 - Modern Physics

An introductory survey into modern physics. Major topic areas include: relativity theory, old quantum theory, new quantum theory, solid state theory, nuclear physics, and particle physics.

Prerequisites \& Notes
PHYS 212, 213; Co-requisites: MATH 240 and PHYS 331
Credits: 4

## PHYS 421 - Materials Safety and Equipment Overview for Nanofabrication - NMT 311

This course provides an overview of basic nanofabrication processing equipment and materials handling procedures with a focus on safety, environment, and health issues. Topics covered include: cleanroom operation, environmental, safety, and health issues, vacuum pump systems operation, environmental safety and health issues (covering direct drive mechanical, roots blowers, turbomolecular, and dry mechanical systems); thermal- processing equipment operation, safety, environmental, and health issues (covering horizontal, vertical, rapid thermal annealing tools); chemical vapor deposition system operation, safety, environmental, and health issues (covering gas delivery, corrosive and flammable gas storage and plumbing, regulators, and mass flow controllers); and vacuum deposition/etching system operation, safety, environment, and health issues (covering microwave and RF power supplies and tuners, heating and cooling units, vacuum gauges, valves, and process controllers). Specific materials handling issues include those arising from using deionization water, solvents, cleansers, organic materials, ion implementation sources, diffusion sources, photoiesists, developers, metal dielectrics and toxic, flammable, corrosive and high purity gases as well as packaging materials.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State
Credits: 3

## PHYS 422 - Basic Nanofabrication Processes - NMT 312

The course provides an overview of basic processing steps used in all applications of nanofabrication. Both top-down and bottom-up nanofabrication are included. The majority of the course details a step-by-step description of the equipment and processes needed to fabricate devices and structures such as bio- chips, CMOS transistors, power devices, microelectromechanical (MEM) devices, and opto-electronic structures. Students learn the similarities and differences in both the equipment and process flows needed in fabricating all of these various structures.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State

Credits: 3

## PHYS 423 - Thin Films in Nanofabrication - NMT 313

This course covers thin film deposition and etching practices in nanofabrication. The deposition techniques addressed in the first part of the course include atmospheric, low pressure, and plasma enhanced chemical vapor deposition and sputtering, thermal evaporation, and beam evaporation physical vapor deposition. Also included are self-assembling molecule based techniques. Materials considered include organics, dielectrics (e.g., nitrides, oxides), polysilicon (doped and undoped), metals (e.g., aluminum, tungsten, copper), adhesion promoters and diffusion barriers. The second part of the course focuses on etching processes and emphasizes reactive ion etching (single wafer, batch), high-ion-density reactors, ion beam etching and wet chemical etching. Students receive hands-on experience in depositing and etching dielectric, semiconductor, and metal materials using state-of-the-art tools and experience practicing the steps critical to micro- and nanofabrication of structures used in a variety of fields from biotechnology and the biomedical fields to microelectronics.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State
Credits: 3

## PHYS 424 - Advanced Lithography and Dielectrics Nanofabrication - NMT 314

This course covers all aspects of lithography from design and mask fabrication to pattern transfer and inspection. The course is divided into three major sections. The first section describes the lithographic process from substrate preparation to exposure. The second section examines the processes from development through inspection (both before and after pattern transfer). This section introduces optical masks, aligners, steppers and scanners. In addition, critical dimension (CD) and profile control of photoresists are investigated. The last section discusses advances in optical lithographic techniques such as phase shifting masks and illumination schemes as well as molecular ruler, e-beam, xray, EUV, and ion beam lithography.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State
Credits: 3

## PHYS 425 - Materials Modification in Nanofabrication - NMT 315

This course covers in detail the processing steps used in modifying material properties in nanofabrication. Included are chemical reaction, growth and annealing processes. The impact of thermal processing and thermal processing on defects, gettering, and impurities and overall electrical, mechanical, optical, and chemical properties are studied. The student grows and measures gate and field oxides, implants and activates source and drain regions, and evaluates thermal budget requirements using state-of-the-art tools. Included also are other modification technologies such as ion implantation, diffusion and chemical surface preparation and treatment. Substrate preparation processing such as slicing, etching, polishing and epitaxial growth are also covered.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State

Credits: 3

## PHYS 426 - Characterization, Packaging and Testing of Nanofabrication Structures - NMT 316

This course examines a variety of measurements and techniques essential for controlling micro- and nanofabrication processes. Monitoring techniques such as residual gas analysis (RGA), optical emission spectroscopy (OES) and end point detection are discussed. Characterization techniques such as scanning electron microscopy x-ray photoelectron spectroscopy, atomic probe methods advanced optical microscopy, optical thin film measurements, ellipsometry, and resistivity/conductivity measurements are introduced and tied to process control. Basic measurements for yield analysis and process control are also stressed. These include breakdown measurements, junction testing, and capacitancevoltage and current voltage characterization. In addition, the characteristics of some simple bio-chip structures and MEMs devices are obtained and discussed. The student learns about the manufacturing issues involved in interconnects, materials compatibility and final device assembly. Aluminum, refractory metals and plastic fabrication techniques and characterization are discussed in detail along with topics such as diffusion barriers, contact resistance, electro migration, corrosion, and adhesion. The importance of planarization techniques such as deposition/etchback and chemical/mechanical polishing are emphasized. Lastly, procedures such as die separation, bonding, and sealing and final test for both conventional Cs and MEMs and biomedical devices are examined.

## Prerequisites \& Notes

Acceptance into the NMT Capstone Semester at Penn State
Credits: 3

## PHYS 480 - Quantum

In this introductory course in quantum mechanics, the foundations and origins will be covered. Other topics will include wave packets, the uncertainty principle, the Schroedinger equation, operator formalism, eigen functions, spherically symmetric systems, angular momentum, spin and scattering theory.

## Prerequisites \& Notes

PHYS 331, 411 and MATH 240; Co-requisite: MATH 301

Credits: 3

## PHYS 490 - Independent Study

Investigation of the theoretical or experimental area following a plan or proposal initiated by the student and approved by the major advisor.

## Prerequisites \& Notes

permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## PHYS 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

Credits: 1 to 3

## PHYS/CHEM 301 - Physical Chemistry I

Thermodynamics and chemical kinetics.
Prerequisites \& Notes
CHEM 108, 112, PHYS 212 or 213 and MATH 230

Credits: 3

## POLS 101 - American National Government

A survey of American national politics, emphasis on the constitution, parties, interest groups, elections, organization and structure of government.

Credits: 3

## POLS 103 - International Relations

An overview of the politics of various governments; the nature of relations among nations; a study of problems such as terrorism and multinationals as political participants.

Credits: 3

## POLS 105 - Introducation to Political Theory

An introduction to classical and modern theories of politics, governments, and ideologies.

Credits: 3

## POLS 111 - Grassroots Democracy

The average American citizen has more contact with the administrative agencies of government than with elected public officials. The course is designed to provide people with the necessary information to accomplish the following: preserve and protect their rights when interacting with administrative officials, participating in the formulation of "street level" policies, understanding the issues involved in the ongoing public debate about "government regulation."

Credits: 3

## POLS 151 - Introduction to Public Administration

The study of the organization and procedures of administrative agencies.

Credits: 3

## POLS 190 - Experimental

A one-time experimental course offering.
Credits: 0

## POLS 195 - Workshop

Special topics of interest to undergraduates and selected members of the community.

Credits: Variable

## POLS 198 - Selected Topics

The in-depth examination of a specific topic to be determined by the department in consultation with the instructor.
Credits: 0

## POLS 200 - State and Local Government

Examines state levels of government. Emphasis is on constitutions, parties and interest groups, elections, organization and structure of government.

Credits: 3

## POLS 202 - Politics of Law Enforcement

The study of the courts, police, offenders, and the community in terms of the criminal justice system.
Credits: 3

## POLS 205-Local Administration

An introduction to the sub-state administration of public service, counties, municipalities, special districts, and local quasi-governmental organizations.

Credits: 3

POLS 215 - Rural and Urban Planning

An introduction to social and physical planning for rural areas, towns and cities. Cross-listed with G\&ES 215.
Credits: 3

## POLS 220 - Foreign Policy

The study of selected instruments of foreign policy, how it is formulated and implemented; the focus is on the U.S.

## Prerequisites \& Notes

Sophomore class standing

Credits: 3

## POLS 224 - Civil Liberties

An examination of the development, nature and content of civil liberties in the United States.
Credits: 3

## POLS 232 - Nonprofit Management

An examination of management techniques in community service and nonprofit organizations.

Credits: 3

## POLS 253 - Administrative Law

A study of the legal basis, powers, and procedures of the administrative agencies.

Credits: 3

## POLS 255 - Introduction to Public Policy

The study and evaluation of the formulation, enactment, and implementation of public policies.

Credits: 3

## POLS 263 - Introduction to Comparative Politics

The stress is on descriptions and conceptions of the state and political institutions in the non-Western and Western worlds; with attention on policy-making, national issues, and systems.

Credits: 3

## POLS 280 - Community Development

This course surveys the field of Community Development, within the context of community collaboration and civic leadershiip. Topics include community organizations, sustainable community programs, community policing, economic development programs, private/public partnerships, and the role of appointed and elected officials in community development.

## Prerequisites \& Notes

Prerequisite: POLS 101 or POLS 151

Credits: 3

## POLS 290 - Experimental

A one time experimental course offering.

Credits: 0

## POLS 295 - Workshop

Special topics of interest to undergraduates and selected members of the community.
Credits: Variable

## POLS 298 - Selected Topics

The in-depth examination of a specific topic to be determined by the department in consultation with the instructor.

Credits: 0

## POLS 300 - Intergovernmental Relations

Study of federalism, its impact on administrative policy, and the current forms of intergovernmental relations including grants-in-aid and revenue sharing.

Credits: 3

## POLS 305 - Ethical Practice in Public Administration

A study of morality and ethics in the practices of public organization employees; of conflicts arising from ethical conduct by persons in opposition to role-enforcing others; and of societal conditions for professional ethical conduct in today's society.

Credits: 3

## POLS 310 - Research Methods

An examination of the foundations of systematic research, techniques of data collection and methods of data analysis.
Credits: 3

## POLS 311 - Quantitative Techniques

An introduction to the application of systematic, empirical research methods to the problems and issues of public administration, public policy analysis, and not-for-profit organizations.

Credits: 3

## POLS 321 - The Presidency

The study and evaluation of executive leadership in modern governments; the roles, functions and types of presidential leaders.

Credits: 3

## POLS 322 - The United Nations and International Law

An examination of the development, structure, and operations of the United Nations system and the fundamentals of public international law.

Prerequisites \& Notes
Sophomore class standing
Credits: 3

## POLS 323 - The Courts

The examination of judicial structures, functions and organizations; emphasis on judicial decision-making and policies.

Credits: 3

## POLS 324 - Environmental Law and Policy

The study of political control of the environment. Focus on the roles played by individuals and groups. Cross-listed with G\&ES 324.

Credits: 3

## POLS 325 - The Congress

The study of legislative structures, functions and organizations; focus on legislative elections, committees, and decision-making.

Credits: 3

## POLS 327 - Public Opinion and Political Attitudes

An examination of the nature, origins, and structures of political attitudes.

## Prerequisites \& Notes

3 credits of Political Science or permission of the instructor

Credits: 3

## POLS 329 - Political Learning

The course examines the process by which the transmission of political values, attitudes, perceptions and behaviors are undertaken in different political systems.

Credits: 3

## POLS 330 - Managing Community Resources

This course introduces students to the techniques, practices and processes of human resources and budgeting and financial management for state and local governments and non-profit community organizations.

## Prerequisites \& Notes

Prerequisite: POLS 151
Credits: 3

## POLS 331 - Japanese Politics and Culture

This course is designed to be a survey of Japanese politics, society, and culture. It will cover such areas as arts, history, philosophy, but will focus on politics and problems associated with all of these areas.

## Prerequisites \& Notes

Sophomore class standing

Credits: 3

## POLS 333 - The Political Film

The Political Film will be presented as an expression of social concerns in our society. Individual films will be evaluated as vehicles, which can influence people by disseminating ideas, convey points of view and comment on matters of political controversy.

Credits: 3

## POLS 340 - The Historical and Political Legacies of the Vietnam Era

Examines the roots, nature, and course of the war in Vietnam and the accompanying cultural and political developments in the U.S. with a particular concern for how the war influences our contemporary social and political context. Cross-listed as HIST 340.

Credits: 3

## POLS 341 - Classical Political Thought

The examination and evaluation of political theorists to approximately the year 1500; Plato, Aristotle, Augustine, Aquinas and others.

Credits: 3

## POLS 343 - Modern Political Thought

The examination and evaluation of political theories from the year 1500 to approximately 1850: Machiavelli, Hobbes, Locke, Rousseau, and others.

Credits: 3

## POLS 345 - Contemporary Political Thought

The study of contemporary political theory from Marx and Mill to the present period. The course will cover such theorists as Lenin, Marcuse, Freud, Arendt, Habermas, Niebuhr, and others.

Credits: 3

## POLS 348 - The Holocaust: Genocide and Political Violence

An examination of the Holocaust as the model case of genocide in the modern world. The course will examine the comparability of the Holocaust to other incidences of genocide and its applicability to contemporary political concerns.

Credits: 3

## POLS 349 - Utopian Experiments: Issues of Gender and Power

This course will examine the various alternative plans for the intentional restructuring of society as exhibited in the works of utopian theorists.

Credits: 3

## POLS 353 - Resource Development and Grant Writing

Resource development, including grant writing and social entrepreneurs, is increasingly important to the future of nonprofit and educational organizations. This course addresses methods for integrating resource development and income generation into an organization's life. Three themes are found in this course: resource development as a management function, resource development as a management process, and issues in resource development.

Credits: 3

## POLS 359 - Policy Analysis and Evaluation

An examination of the theoretical and practical issues associated with the application of analytic and evaluative techniques to selected public policy problems and programs.

Credits: 3

## POLS 360 - Parties and Elections

An examination of the structures and functions of political parties in our electoral system.

Credits: 3

## POLS 365 - International Political Economy

The in-depth analysis of the political relationships among nation-states.

## Prerequisites \& Notes

Sophomore class standing

Credits: 3

## POLS 366 - Introduction to Chinese Politics

This course will examine China's recent political history, the structures and functions of its political system, current political and economic developments in China, and assessments of China's place in the new global order.

Credits: 3

## POLS 367 - National and International Security: Problems and Issues

National security problems combine aspects of American government, international relations, game theory, and logistical problems derived from research development priorities, economics. The course introduces the major issues of our time such as arms control, disarmament, the nature of war, the reality of decision-making and various case studies.

## Prerequisites \& Notes

Sophomore class standing

Credits: 3

## POLS 369-Politics of Developing Areas

A developmental approach to the comparative study of the primary functions, structures and capabilities of various industrializing political systems such as India, China, Mexico, Brazil, Tanzania.

## Prerequisites \& Notes

Sophomore class standing

Credits: 3

## POLS 371 - Politics, Development and Security in East Asia

This course will examine the politics, economic development policies, and national security interests of Japan, South and North Korea, China and Taiwan.

Prerequisites \& Notes
Sophomore class standing
Credits: 3

## POLS 375 - Women and Politics

The course will examine the effect of socialization and the impact of culture on women, gender differences in patterns of political participation; legal, political and social rights of women; and the effects of the political system upon the lives of women and their families.

Credits: 3

## POLS 383 - Challenges of the American Experience I (to 1865)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## POLS 384 - Challenges of the American Experience II (1865 to the Present)

An interdisciplinary course including American literature, history, philosophy, and politics examining the roots of American institutions, values and cultures and their significance for the challenges confronting contemporary society.

Credits: 3

## POLS 390 - Experimental

A one time experimental course offering.

Credits: 0

## POLS 395 - workshop

Special topics of interest to undergraduates and selected members of the community.

Credits: Variable

## POLS 398 - Selected Topics

The in-depth examination of a specific topic to be determined by the department in consultation with the instructor.

Credits: 0

## POLS 403 - Constitutional Law

The case study and analysis of the development and growth of constitutions through judicial interpretation.

Credits: 3

## POLS 445 - Regional Planning

Deals with planning for the future of regions that are larger than any single local government. Consideration is given to economic development, land use, transportation, and other regional planning concerns. Cross-listed with G\&ES 445.

## Prerequisites \& Notes

G\&ES/PUBA 215

Credits: 3

## POLS 451 - Harrisburg Internship

Assignment as an intern with a govern-mental agency in the state capital in Harrisburg, Pa. Open to all students at Slippery Rock University.

## Prerequisites \& Notes

Selection by competitive process

Credits: 9

## POLS 452 - Harrisburg Internship Project

A research project developed by the intern and approved by the Harrisburg internship coordinator on some aspect of government activities or public policy.

## Prerequisites \& Notes

Selection for the Harrisburg Internship Program
Credits: 3

## POLS 454 - Harrisburg Internship Seminar

Weekly seminar composed of all interns in the program and taught by the Harrisburg internship coordinator. Speakers from state government will address the seminar and the seminar will participate in several exercises designed to increase skills in governmental processes.

## Prerequisites \& Notes

Selection as intern in the Harrisburg Internship Program
Credits: 3

## POLS 455 - The Politics of National Service and Civil Society

An examination of community service and service learning as setting and methodology for understanding inclusive community with its attendant responsibilities, obligations, policies, structures, norms, and functions.

Credits: 3

## POLS 490 - Independent Study

In-depth reading and research in an area of particular interest to the student, with the guidance of a faculty member.
Credits: 1 to 3

## POLS 495 - Workshop

Special topics of interest to undergraduates and selected members of the community.

Credits: Variable

## POLS 498 - Selected Topics

The in-depth examination of a specific topic to be determined by the department in consultation with the instructor.
Credits: 0

## PREE 105 - Leisure-Centered Living

The constructive use of leisure and education for leisure are essential tools for a person's successful growth and development. Leisure-centered living is designed to help students investigate, evaluate, and plan leisure/play as a basic human need and necessity for well-being.

Credits: 3

## PREE 110 - Foundations of Parks and Recreation

The historical and philosophical background of the leisure movement, recreation organizations and professional development.

Credits: 3

## PREE 120 - Inclusive Leisure Services

This course is designed to introduce the student to inclusive leisure services. The course reviews attitudes regarding people with disabilities, barriers to inclusion, enabling terminology, and legislative initiatives, which promote inclusion. The ADA will be highlighted along with information on various disabling conditions. The goal of this course is to facilitate an increased awareness of people with disabilities and considerations for providing inclusive services.

Credits: 3

## PREE 160 - Intoduction to Environmental Education

This course will focus on an introduction to the field of environmental education. Historical antecedents will be discussed, including nature education, outdoor education, and conservation education. Philosophies and methodologies appropriate for a basic understanding of environmental education will be examined.

Credits: 3

## PREE 170 - Fundamentals of Park and Resource Management

The use of outdoor resources for recreation, the roles of the public and private sectors in outdoor recreation, and outdoor recreation planning.

Credits: 3

## PREE 207 - Computer Aided Planning and Management

Computer applications in planning and management of parks and recreation facilities and personnel.

Credits: 3

## PREE 211 - Outdoor Leadership

This course is a study of the principles and practices essential for outdoor leaders with emphasis on the development of KSAs to lead groups into the wild outdoors.

Credits: 3

## PREE 213 - Environmental Resource Analysis

A study of the principles and techniques of environmental resource analysis, landscape and scenery classification and procedures for environmental quality and impact analyses.

Prerequisites \& Notes
PREE 170

Credits: 3

## PREE 215 - Park and Recreation Public Relations

The theory, principles and practices of public relations of value to parks and recreation personnel including oral, written and graphic presentations useful in public relations and interpretive efforts.

Prerequisites \& Notes
PREE 110

Credits: 3

## PREE 216 - Wilderness Trek Leadership

A field course to provide the opportunities for students to demonstrate and practice wilderness trek leadership KSAs.

Prerequisites \& Notes
PREE 211

Credits: 1

PREE 217 - Wilderness Trek Planning and Logistics

A field course to provide the opportunity for students to demonstrate and practice wilderness trek planning and logistics.

Prerequisites \& Notes
PREE 211

Credits: 1

## PREE 220 - Therapeutic Recreation Services

Introduces students to the general field of therapeutic recreation and provides an introduction to various disabilities and how the TR process applies.

Prerequisites \& Notes
PREE 120

Credits: 3

## PREE 230 - Recreation Leadership

The theory, principles and practices of recreation leadership including planning, organization, activity values and evaluation.

Prerequisites \& Notes
PREE 110

Credits: 3

## PREE 232 - Therapeutic Recreation for People with Physical Disabilities

This course will provide information on various physical disabilities and the potential application of TR services with individuals with physical disabilities. The incidence, prevalence, etiology and treatment for each disability will be presented along with implications for TR practice.

Prerequisites \& Notes
PREE 120

Credits: 3

## PREE 233 - Therapeutic Recreation for People with Mental Health and Psychosocial Disorders

This course will provide information on various mental health impairments and addictive and social disorders. The incidence, prevalence, etiology and treatment for each condition will be presented along with implications for TR practice.

Prerequisites \& Notes
PREE 120

Credits: 3

## PREE 234 - Leisure Services Programming

This course focuses on recreation program planning, implementation, and evaluation.

## Prerequisites \& Notes

PREE 110

Credits: 3

## PREE 241 - Introduction to Permaculture

This course examines the permaculture design system for creating sustainable human environments for ecologically sound habitats, work circumstances and food production systems.

Credits: 3
PREE 251 - Field Experience

Opportunities for basic practical experience in a variety of park and recreation/environmental education settings. May be repeated up to 3 times.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1

## PREE 260 - Natural History of Ecosystems I

This field oriented course is designed to integrate basic scientific inquiry and ecological field techniques to develop skills of analysis, synthesis and evaluation of scientific information for the purpose of environmental and resource management. Results of field investigations are then applied to relevant ecological problems and management objectives for the purpose of environmental decision making.

## Prerequisites \& Notes

PREE 160 or 170

Credits: 3

## PREE 261 - Natural History of Ecosystems II

This course provides basic natural history information and skills for environmental education and interpretative programming/fundamentals of birding, plant and animal identification, as well as sky and landscape interpretation are among the topics covered. Field collection, specimen preservation, and state and federal laws regulating field studies and possession of flora and fauna will be discussed.

## Prerequisites \& Notes

PREE 160 or 170

Credits: 3

## PREE 271 - Law Enforcement Firearms

This course provides basic orientation to and qualification with the approved handgun and familiarization with the 12 gauge shotgun including safety and "shoot-no shoot" situations.

Credits: 3

## PREE 311 - Principles of Commercial Recreation/Tourism

A study of the various forms of commercial recreation, business and facilities providing recreational opportunities.

Credits: 3

## PREE 313 - Recreation Area Design

A study of the fundamentals of site planning for recreation areas and facilities.

## Prerequisites \& Notes

A basic planning and design course or permission of the instructor

Credits: 3

## PREE 314-Clinical Aspects of Therapeutic Recreation

This course provides a more in-depth look at TR including professional standards of practice, health care accreditation, documentation methods, application of activity analysis in treatment planning.

## Prerequisites \& Notes

PREE 220

Credits: 3

## PREE 316 - Management of Leisure Services and Commercial Facilities

A study of the design, operation and maintenance of selected park and recreation facilities.

Credits: 3

## PREE 318 - Park and Recreation Administration

The organization and administration of parks and recreation services, including organizational management, personnel practices and labor relations, financial and business procedures and legal aspects.

Credits: 3

## PREE 319 - Client Assessment in Therapeutic Recreation

Course designed to familiarize the student with the overall concept of assessment within the field of therapeutic recreation. Interviewing skills, analyzing assessment procedures, source and processes will be studied. The relationship between assessment as a component of treatment program planning will be explored.

## Prerequisites \& Notes

PREE 220, 229

Credits: 3

## PREE 320 - Therapeutic Recreation Program Design

This course focuses on techniques of therapeutic recreational program planning interventions and leadership strategies to meet the needs of persons with disabilities and disorders.

Prerequisites \& Notes
PREE 220, 229 and 319 or permission of the instructor

Credits: 3

## PREE 341 - Challenges to a Sustainable Future

This course explores the broad concept of "sustainability." We will explore our own thinking on sustainability, mainstream opinions, as well as some alternative voices. The many facets of sustainability are recognized, and certain
aspects are selected for more in-depth analysis.

Credits: 3

## PREE 342 - Group Facilitation and Leadership

This course will cover the concepts related to working with groups as a facilitator. Hands-on approaches to program design, sequencing activities and processing experiences will be examined. Students will facilitate their classmates through a group development experience making use of SRU's low and high challenge courses and the Leadership Reaction Center.

Credits: 3

## PREE 347 - Interpretive Methods and Programming

A study of the principles and methods to interpret natural and cultural history in parks and other outdoor settings.

Credits: 3

## PREE 351/352 - Practicum in Recreation Leadership/Environmental Education

Observation and participation in parks and recreation or environmental education activities.

Prerequisites \& Notes
Permission of the instructor

Credits: 3

## PREE 354 - Cooperative Education III

A supervised work experience for students in the cooperative education program. May be taken twice.

Credits: 6

## PREE 361 - Environmental Teaching

This course is a study of educational methodology using a total environmental perspective. Field trips required.

Credits: 3

PREE 371 - Fundamentals of National Park Service Law Enforcement

This course covers the legal and administrative fundamentals of National Park Service law enforcement including federal law and NPS policies and guidelines.

Credits: 3

PREE 372 - Visitor Services Management

A study of visitor services including information, safety, rescue and law enforcement services.

Credits: 3

## PREE 374 - Federal Law \& Park Policy

This course is designed to provide students with advanced knowledge of federal law, policies, and procedures. Students will develop an in-depth understanding of Federal policy for various land management agencies with emphasis on National Park Service policy. The course will also cover legal updates in park law enforcement.

Credits: 3

## PREE 377-Cultural Resources Management

This course provides a comprehensive introduction to the management of cultural and historic resources. The course examines the goals, legislation, and methodologies related to cultural resources management, research and programming.

Credits: 3

## PREE 378 - Parks, Wildlife and Wildlife Management

Course will cover basic concepts related to wildlife management and wild land management practices for terrestrial and aquatic systems. Fire management as it relates to wildlife and wild lands will also be examined.

Credits: 3

## PREE 380 - Junior Honors

Course provides opportunity for the academically superior junior to conduct research and/or a project not otherwise available under the curriculum.

## Prerequisites \& Notes

Permission of advisor, honors committee, departmental chairperson and dean

Credits: 1 to 3

## PREE 399 - Introduction to Research in Parks and Recreation

A study of research methods applicable to park and recreation situations.

## Prerequisites \& Notes

Junior PREE major or permission of the instructor

Credits: 3

## PREE 411 - Tourism Planning and Operations

This course studies the different components of travel, as well as the planning and operation of group/package tours and tourist attractions.

Credits: 3

## PREE 412 - Open Space Planning

Fundamentals of open space planning including feasibility studies, resource analysis, site analysis and planning and design fundamentals. Field trips required.

Credits: 3

## PREE 413 - Site and Building Feasibility Studies

This course is designed to develop a comprehensive feasibility study for selected land-based sustainable enterprises. The course will include an on-site inventory and analysis, market evaluation, preliminary planning and cost-return analysis. Three project tracks recreation resource management, community development and sustainable agriculture.

Credits: 3

## PREE 414 - Concepts and Trends in Travel and Tourism

The course will focus on current concepts and trends of the travel and tourism industries both domestically and internationally.

Credits: 1 to 3

## PREE 415 - Issues in Parks and Recreation

An integrative course for detailed study of current issues in parks and recreation with emphasis on unique and imaginative solutions to the challenges facing the recreation/parks profession. Must be a senior to enroll.

Credits: 3

## PREE 416-Resort/Conference Group Recreation

This course examines the planning, organization, pricing, and evaluation of recreation programs, activities, and special events at various four season residential, time share, and camping resorts. This course will also analyze the planning, developing, marketing, administration, and implementation of conference group recreation and special events.

Credits: 3

## PREE 420 - Recreation and the Aging Process

The course will provide an overview of the aging process as it relates to therapeutic recreation service provision and leisure participation. It will focus on developmental issues, including psychosocial, biological and economic issues in later life. The course addresses these issues as they occur across the lifespan, from mid-adulthood to senescence.

## Prerequisites \& Notes

PREE 220 or permission of the instructor
Credits: 3

## PREE 422 - Leisure Education Strategies

An investigation of the historical, philosophical, psychological and educational foundations of leisure education. The functions of leisure counseling, including a variety of instruments and techniques appropriate for a variety of publics, is examined.

Prerequisites \& Notes
PREE 220, 229, 319 and 320

Credits: 3

## PREE 423 - Therapeutic Recreation Interventions/Leisure Education

This course will offer an overview of several different Therapeutic Recreation interventions and techniques, including leisure education strategies. The primary focus of this course will be on the application and implementation of therapeutic recreation interventions.

## Prerequisites \& Notes

PREE 220, 229, 232, 233, 320 and 319 or permission of the instructor
Credits: 3

## PREE 436-Tournament Structure and Administration

A study of the organization, administration and supervision of tournaments held in resorts, athletic clubs, and communities.

Credits: 3

## PREE 450 - Internship

A supervised off-campus work experience in an appropriate aspect of parks and recreation or environmental education work. Open only to PREE majors with advanced standing.

Credits: 9 to 12

## PREE 454 - Cooperative Education IV

A supervised work experience for students in the cooperative education program. May be taken twice.

Credits: 6

## PREE 455 - Student Teaching - Environmental Education

Under the guidance of a cooperating teacher and university supervisor, students engage in two, eight week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

Credits: 12, 6, 3

## PREE 464 - Environmental Decision Making

This course focuses on active participation in the environmental decision making process through the development of cooperative and individual learning strategies which can be transferred to a classroom or non-formal educational setting. The course examines the process of making decisions that impact the environment from identifying environmental problems, investigating environmental issues, and perfecting strategies for taking action to address these situations. Students will learn and develop skills of scienctific inquiry, fact finding, critical thinking, issue analysis and conflict resolution. Students will design an issue investigation project to adress an environmental issue of their choice.

Credits: 3

PREE 470 - Resource Policy and Administration

A study of the administrative and executive aspects of resource management.

Credits: 3

## PREE 471 - NPS Law Enforcement

This course provides an overview of NPS law enforcement policies and procedures, relevant federal laws, Titles 36 and $50, \mathrm{CFR}$, and courtroom procedures.

Credits: 3

## PREE 472 - Park Law Enforcement

This course provides basic law enforcement skills essential for the park law enforcement ranger.

Credits: 3

## PREE 475 - Park and Resource Management

The principles and practices of recreational land and water management. Field trips required.
Prerequisites \& Notes
PREE 170

Credits: 3

## PREE 478 - Resource Management

A study of resource management planning applied to park and recreation areas.

Prerequisites \& Notes
PREE 340, 475 or permission of the instructor
Credits: 3

PREE 480 - Senior Honors

Course provides opportunity for academically superior seniors to conduct research and/or a project not otherwise available in the curriculum.

## Prerequisites \& Notes

Permission of advisor, honors committee, departmental chairperson and dean

Credits: 1 to 3

## PREE 490 - Independent Study

A special study opportunity for students to investigate, in-depth, approved topics in recreation or environmental studies. Topic and credit established by student and supervising instructor.

## Prerequisites \& Notes

Permission of the instructor, deparmtental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## PREE 491 - Professional Seminar

This course is designed to assist students in preparing for entry into the environmental education profession. Topics will include career planning, employment opportunities, employment seeking skills, and discussions centering on areas of interest to the student.

Credits: 1

## PSYC 100 - Psychology Applied

Introduction to behavior problems and the relationship of cognitive, social, ecological and cultural factors.

Credits: 3

## PSYC 105 - Introduction to Psychology

Psychology as a natural science covering the goals and principles of a science of behavior.
Credits: 3

## PSYC 205 - Environmental Psychology

Man's interference with the environment, including over-population, isolation, social institutions as environment, noise, housing, community design, behavioral effects of pollutants and behavior genetics.

## Prerequisites \& Notes

PSYC 105

Credits: 3

## PSYC 208 - Personality

Study of normal personality: structure, dynamics, change, measurement and theories. Psychological knowledge from various sources is integrated in the search for an explanation of human behavior.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 210 - Introduction to Industrial-Organizational Psychology

Introduction to the application of psychology to business, industry and other organizational behavior. Subjects include employment, promotion practices, supervision, motivation, training and human factors.

## Prerequisites \& Notes

Introduction to PSYC 105, provides students with sufficient exposure ot the relevant seminal and contemporary theories and issues in psychology that influence the research and practice of I-O psychology.

Credits: 3

## PSYC 221 - Research Methods and Statistical Applications I

Introduction to descriptive and inferential statistics used in evaluation and reporting of behavioral research.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 233 - Sensation \& Perception

Basic anatomy, physiology and role of sensory systems in perception and sensation.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 240 - Human Sexual Behavior

Examines personal socio-cultural factors in sexual functioning. Motivational, developmental, personality and clinical implications are explored.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 276 - Abnormal Behavior

Overview of the field of abnormal behavior, including the current classification system (DSM IV), and the phenomenology, diagnosis, etiology, and treatment of psychological disorders.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 300 - Psychology of Gender

A survey of empirical and theoretical psychological studies of women.
Prerequisites \& Notes
Any of the following: PSYC 105, WMST 115, HIST 320, POLS 345, SASW 339, GERO 425, ENGL 243
Credits: 3

## PSYC 302 - Psychology of Criminal Behavior

The study of how individual criminal behavior is acquired, evoked, maintained and modified.

Prerequisites \& Notes
PSYCH

Credits: 3

## PSYC 303 - Learning

Classical and instrumental conditioning, verbal learning, problem solving, habit formation and retention.
Prerequisites \& Notes
PSYC 221, 225

Credits: 3

## PSYC 306 - Introduction to Pyschological Testing

Psychological tests including intelligence, achievement, aptitude, interest and personality.
Prerequisites \& Notes
PSYC 221

Credits: 3

## PSYC 310-Organization and Management

A survey of the major approaches to organization theory with emphasis on the application of psychological theories to behavior in organizational settings.

Prerequisites \& Notes
PSYC 210 and permission of the instructor
Credits: 3

## PSYC 311 - Physiological Psychology

Biological foundations of behavior including anatomical, physiological and chemical aspects of mammalian brain from the cellular to systems level. Topics include substrates of complex behavior and pathological states.

## Prerequisites \& Notes

PSYC 105, 325/326 or permission of the instructor.
Credits: 3

## PSYC 315 - Psychology of Lesbian and Gay Identities

Overview of psychological perspectives and current research concerning lesbian, gay, and bisexual identities.

Prerequisites \& Notes
PSYC 105 or one Women's Studies course or permission of the instructor

Credits: 3

## PSYC 320 - Introduction to Clinical Psychology

Introduction to the field of clinical psychology. Includes an overview of training, similarities, and differences among various mental health service providers. Students will be introduced to interviewng skills, approaches to psychotherapy and assessment, treatment planning, and areas of specialization and application within the field.

Prerequisites \& Notes
PSYC 105, 276 and 325/326

Credits: 3

## PSYC 321 - Drugs and Behavior

Behavioral effects and biological mechanisms underlying psycho-pharmacological agents. Covers both medical application and recreational abuse of drugs.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 325 - Introduction to Experimental Psychology

Training in the design and performance of behavioral experiments.
Prerequisites \& Notes
PSYC 221

Credits: 3
PSYC 326 - Experimental Psychology Laboratory

A laboratory experience to accompany PSYC 225.

## Prerequisites \& Notes

Co-requisite: PSYC 225

Credits: 1

## PSYC 334 - Health Psychology

An overview of the field and of the role of pschology in health. Topics include health-enhancing and healthcompromising behaviors; the effects of stress, coping, and personality on health; psychoneuroimmunology; treatments of specific problems and disorders; and interacting with health care services.

## Prerequisites \& Notes

PSYC 105 and PSYC 35/325, or permission of instructor.

Credits: 3

## PSYC 338 - Cognitive Psychology

A survey of theories and facts related to complex information processing and conscious experience in humans. Topics covered will include attention, memory, problem solving, symbolic processes and human consciousness.

## Prerequisites \& Notes

PSYC 105, 221 and 225

Credits: 3

## PSYC 344 - Developmental Psychology

Human development from conception to senescence with emphasis on the theoretical and practical implications.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 360 - History of Psychology

Changes in approaches to understanding behavior as they appear in the evolution of Western civilization.

Prerequisites \& Notes
PSYC 105

Credits: 3

## PSYC 364 - Child and Adolescent Development

Intensive study of the biosocial, cognitive, and psychosocial aspects of development children and adolescents.

## Prerequisites \& Notes

PSYC 325/326 or permission of instructor.
Credits: 3

## PSYC 365 - Psychology of Aging

Psychosocial, clinical and developmental aspects of aging, implications of optimal developmental and effective management of problems confronting the aged.

Prerequisites \& Notes
PSYC 225

Credits: 3

## PSYC 377 - Social Psychology

The psychological implications of man's social existence; a study of the social forces affecting human behavior.

## Prerequisites \& Notes

PSYCH 105

Credits: 3

## PSYC 378 - Clinical Child Psychology

An overview of the clinical practice with children, with a concentration on child therapies as they are part of the contemporary practice of psychology.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

## PSYC 420-Community Service Practicum in Psychology

160 hours of documented relevant volunteer placement in an approved public, not for profit or private agencies to be supervised through the Service Learning Institute. A formal paper related to the experience is required to assist the student with meaningful integration of the experience.

## Prerequisites \& Notes

Declared major, Jr/Sr standing, minimum 2.0 QPA in major, 2.0 qPA overall, completion of PSYC 221 and 325 and at least 4 core electives, written application and departmental permission

Credits: 3

## PSYC 421 - Research Methods and Statistical Applications II

Intermediate forms of statistical analysis of behavioral research, their rationale, and computer applications are introduced.

PSYC 221, 225

Credits: 3

## PSYC 430 - Research Practicum in Psychology

Supervised research experience with Psychology department faculty member. Studnets identify a mentor and work together with their mentor to develop and implement a research plan, and write an APA style paper reporting the results. Course grading: Pass/No Credit

## Prerequisites \& Notes

Declared major, Jr/Sr standing, minimum overall and Psych QPA of 3.0, PSYC 221 and 325and at least 4 core electives, written application and departmental permission

Credits: 3

## PSYC 449 - Seminar in Psychology

Advanced topics will be announced in the schedule.

## Prerequisites \& Notes

9 credits of Psychology of permission of the instructor

Credits: 3

## PSYC 450 - Psychology Internship

Supervised placement and research in selected public and private agencies at appropriate institutions. ion. Course grading: Pass/No Credit.

## Prerequisites \& Notes

Declared major, Jr/Sr standing, minimum overall \& Psych QPA of 2.5, PSYC 221 and 325, at least 4 core electives, written application and departmentl permission

Credits: 6

## PSYC 475 - Behavior Modification

Application of learning and other psychological principles in behavior therapy.

## Prerequisites \& Notes

PSYC 105, 303 or permisson of the instructor

Credits: 3

## PSYC 480 - Behavior Management

Principles, methods and ethics of behavior management in community, industrial and/or congregate facilities.
Prerequisites \& Notes
Prerequisites; PSYC 105, 303

Credits: 3

## PSYC 490 - Independent Study

Supervised project, historical, theoretical or experimental.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## RUSS 101 - Russian Language and Culture I

A broad and practical working foundation in the language.

Credits: 3

## RUSS 102 - Russian Language and Culture II

A broad and practical working foundation in the language.

Prerequisites \& Notes
RUSS 101 or the equivalent

Credits: 3

## RUSS 103 - Russian Language and Culture III

A broad and practical working foundation in the language.

Prerequisites \& Notes
RUSS 102 or equivalent

Credits: 3

## RUSS 202 - Intermediate Russian I

Comprehensive review of Russian grammar with emphasis on developing the students' abilities for proficient oral and written accomplishments.

Prerequisites \& Notes
RUSS 103

Credits: 3

## RUSS 210 - Russian Literature in Translation

A study of representative Russian literary works from its origins to 1917. Courses taught in English; no knowledge of Russian required.

Credits: 3

## RUSS 270 - Study in the Republic of Russia

This course is designed for students who desire to study modern Russia first-hand. Students will study modern Russian economy, housing, the political system, history, and information on Russia while traveling in the Republic of Russia.

## Prerequisites \& Notes

ENGL 101 or equivalent

Credits: 1 to 3

## RUSS 305 - Russian Civilization via Film

A comprehensive analysis of Russian civilization through the media of Russian film. Russian films with subtitles present all major aspects of Russian civilization: the Tatar yoke, Russian expansion, the rise of Muscovy, the social-economic-political conflicts at various levels of tsarism, communication and post-communism. No prerequisite

Credits: 3

## RUSS 306-20th Century Russian Legacy

A broad study of the social, political, historical, economic, and cultural situations of modern Russian from 1917 to the present. Course is offered in English and is open to all interested students.

Credits: 3

## RUSS 490 - Independent Study

Students have an opportunity to study selected areas in greater concentration.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson and dean of the college where the study will be conducted

Credits: 1 to 3

## SASW 103-Contemporary Social Problems

An analysis of major social problems confronting modern society.

Credits: 3

## SASW 105 - Human Diversity

An orientation to living and working with diverse populations within modern American society, including examination of the strengths and stresses associated with diversities.

Credits: 3

## SASW 106 - Race and Ethnic Diversity in the U.S.A.

An introduction to racial and ethnic diversity in the U.S.A., with focus on trends in immigration, demographics, sociocultural dynamics and issues, past and present.

Credits: 3

## SASW 200 - Introduction to Child Welfare

Provides an overview of the child welfare system in the United States, including the history of the development of child welfare policies, programs, and services; exploring best practices in child welfare; and examining current and future issues and problems in this field.

Credits: 3

## SASW 201 - Principles of Sociology

Basic concepts of social behavior, group structure and group processes.

Credits: 3

## SASW 202 - Introduction to Anthropology

Human beings as cultural and biological entities. Emphasis is on primitive and peasant societies.

Credits: 3

## SASW 205 - Introduction to Criminology and Criminal Justice Systems

This course is an introduction to social, economic, political, and legal foundations of crime, crime typology, and research procedures. It also examines theories, public policies, and societal responses to crime and criminals.

Credits: 3

## SASW 211 - Physical Anthropology

This course provides an understanding of the place of the human species within the biological system. It stresses the concepts and processes of evolution and emphasizes the study of human and non-human primates as seen in the fossil record as well as through study of genetics and behavior.

Credits: 3

## SASW 212 - Archaeology/World Prehistory

A discussion of culture history around the world based on archaeological evidence. It begins with early signs of culture called the Paleolithic or Old Stone Age of Africa, Asia, Europe and America (where it is named Paleo Indian), and concludes with the rise of complex, stratified cultures based on agriculture in the Middle East, America, and East Asia.

Credits: 3

## SASW 226 - Population and Society

Sociological/anthropological analysis of selected population trends, problems and controversies in the contemporary world-both literate and non-literate.

Credits: 3

## SASW 250 - Social Welfare Institutions

An introductory analysis of social welfare policies, issues, and institutions.
Credits: 3

## SASW 251 - Introduction to Social Work

An orientation to the field of social work and social work activities in the community. Includes agency lab.

Credits: 3

## SASW 273 - American Corrections

Examines the legally sanctioned methods of dealing with lawbreakers. The correctional methods studied will include institutional and community corrections, and the newer dispositions such as community service, restitution, and electronic monitoring. Current issues examined will include prison gangs, the problem of AIDS, women in prison, and prison privatization.

Prerequisites \& Notes
SASW 201 or PSYC 100 or 200

Credits: 3

## SASW 304 - Urban Sociology

Sociological aspects of urban life. Includes metropolitan areas and small cities.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 309 - Health and Society

An analysis of health services, public policy and institutional relations. Note: This course is taught from either a sociological or anthropological viewpoint. The student should check with the instructor to determine the approach being taken in the current offering.

## Prerequisites \& Notes

SASW 201 or 202 or permission of the instructor
Credits: 3

## SASW 310-Cultural Area Studies

Anthropology course dealing with sociocultural phenomena of specific cultural areas. Topics to be announced. Course may be repeated one time in a different area.

Prerequisites \& Notes
SASW 202

Credits: 3

## SASW 312 - Archaeology Techniques and Laboratory

A course designed to introduce students to basic techniques in the field and to provide laboratory experience in working with field materials.

## Prerequisites \& Notes

SASW 202 and 311 or permission of the instructor

Credits: 3

## SASW 317 - Statistical Methods

Introduction to basic statistical concepts and research techniques used in social research.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 318 - Research Methods

Major methods and procedures used in sociological research.

## Prerequisites \& Notes

SASW 317

Credits: 3

## SASW 320 - Anthropology Methods

Data gathering techniques and evaluation of anthropological phenomena from tribal, peasant and industrial societies.

Prerequisites \& Notes
SASW 202 and 317 or permission of the instructor
Credits: 3

## SASW 321 - Minority Groups

An examination of the minority group concept with special emphasis on women, the poor, behavioral and physical minorities. Note: This course is taught from either a sociological or anthropological viewpoint. The student should
check with the instructor to determine the approach being taken in the current offering.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 322 - Aztecs, Incas and Maya

This course introduces the student to the unique intellectual and cultural achievements of the Native Civilizations of Central and South America prior to the arrival of the Spanish. Two thirds of the course concentrates on Mesoamerica, especially the Aztecs and the Maya. One third on South America, with an emphasis on the civilizations of Peru. The variety of cultural developments, including their great time depth, social, political, economic, and artistic achievements as revealed through archaeological exploration, are explored.

Credits: 3

## SASW 323 - Deviant Behavior

The subject and nature of deviance with particular emphasis on its relativity and its relationship to social control and social change.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 324 - The Family

Comparative perspectives of the family as a universal social institution. Note: This course is taught from either a sociological or anthropological viewpoint. The student should check with the instructor to determine the approach being taken in the current offering.

Prerequisites \& Notes
SASW 201 or 202

Credits: 3

## SASW 325 - Society, Culture and Self

An examination of the relationship between personal characteristics and social environment.

Prerequisites \& Notes
SASW 201 or 202

Credits: 3

## SASW 327 - Religion and Society

Religious behavior as a component of culture and society. Note: This course is taught from either a sociological or anthropological viewpoint. The student should check with the instructor to determine the approach being taken in the
current offering.

## Prerequisites \& Notes

SASW 201 or 202 permission of the instructor

Credits: 3

## SASW 328 - Human Behavior and the Social Environment I

Covers the biophysical, psychological, and social dimensions assessing social functioning during pregnancy, birth, newborn, infancy, and early childhood.

## Prerequisites \& Notes

SASW 201 and PSYC 105

Credits: 3

## SASW 329 - Human Behavior and the Social Environment II

Covers the biophysical, psychological, and social dimensions assessing social functioning during middle childhood, adolescence, young adulthood, and late adulthood.

Prerequisites \& Notes
SASW 328 or permission of the instructor
Credits: 3

## SASW 330-Collective Behavior

An analysis of social movements, publics, crowds, mobs and similar social phenomena.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 333 - Crime, Justice and Society

Crime and the social mechanisms designed to control it, vis-à-vis offender and enforcer.

## Prerequisites \& Notes

SASW 201 or 202 or permission of the instructor

Credits: 3

## SASW 339 - Sex Roles and Society

An examination of sex roles, what they are, how they develop and how they are maintained. An examination of the effects of sex roles on education, occupation, the polity and other institutions as well as the effects of role restrictions of personal relationships. Note: This course is taught from either a sociological or anthropological viewpoint. The student should check with the instructor to determine the approach being taken in the current offering.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 340 - Socieal Inequality

Power in modern society. Theoretical and factual analysis of stratification and mobility.
Prerequisites \& Notes
SASW 201 or 202

Credits: 3

## SASW 342 - Sociology of Aging

Social changes, which accompany aging. Emphasis placed upon how social processes influence patterns of aging and social problems of older people.

## Prerequisites \& Notes

SASW 201 or 202 or GERO 265
Credits: 3

## SASW 343 - Criminal Investigations

This course provides an introduction to criminal evidence and investigations. The topics include how evidence is collected and developed, the different types of evidence, the role of evidence in investigation, and basic investigative principles. This class will also cover deeper aspects surrounding criminal investigation process such as eithics and legal issues. Students will engage in hands-on exercises in investigative techniques to include suspect and witness interviewing, note taking, report writing, arrest procedures, source handling, evidence collection techniques, testifying in court and other procedural principles.

Credits: 3

## SASW 345 - Juvenile Delinquency

The behaviors of adolescents in modern societies have resulted in the need for society to exert various methods of social control. The reasons for these formal and informal control strategies are examined from sociological view of institutional changes.

Credits: 3

## SASW 348 - Sociology of Organizations

Approaches to the study of the structure and functions of large-scale social organizations.

## Prerequisites \& Notes

SASW 201 or 202

Credits: 3

## SASW 355 - Social Work Methods I

Principles and practice of interviewing processes as applied to casework methods.

## Prerequisites \& Notes

POLS 101, PSYC 105, SASW 251, 201, 328 or permission of the instructor

Credits: 3

## SASW 356 - Social Work Methods II

Expands knowledge and skills base to include social work practice with family and group systems.

## Prerequisites \& Notes

SASW 355 or permission of the instructor

Credits: 3

## SASW 357 - Social Work Methods III

Expands knowledge and skills base to include social work practice in communities and larger social systems.

## Prerequisites \& Notes

SASW 250 and 356 or permission of the instructor

Credits: 3

## SASW 360 - Police and Society

This class will explore the interaction between law enforcement and society. This course covers key issues such as the fole and goals of policing, legal issues in law enforcement, use of force and arrest, police ethics, the role of diversity in policing, police culture, police mehtods and other topics related to the interaction of police and society.

Credits: 3

## SASW 401 - Applied Anthropology

Using anthropological concepts and methods, this course explores the role of archaeologists, and physical and cultural anthropologists in understanding and facilitating change in human biological and cultural issues. Prerequisites: SASW 202 and 320 or permission of the instructor.

## Prerequisites \& Notes

SASW 2102 and 320 or permission of the instructor

Credits: 3

SASW 404 - Adjudication in Crime and Justice

This course addresses current topics related to the history, legalities, trends and controversies in law adjudication as it pertains to issues of crime and justice. Students will examine the topics of criminal law, prosecution, defense, and court procedures and desision-making.

Credits: 3

## SASW 407- Social Policy Issues

Problems and issues associated with social policy including the politics of welfare policy.

Prerequisites \& Notes
POLS 101, SASW 250; Co-requisite: SASW 357
Credits: 3

## SASW 412 - Basic Sociological Theory

Historical and modern development of basic concepts of sociology and cultural anthropology.

## Prerequisites \& Notes

SASW 201 or 202, 318 or 320, or permission of the instructor
Credits: 3

## SASW 414 - Law and Social Policy

Explores the legal environment of working in human services. Using law as an organizing theme, it examines how the law is applied in several policy areas such as family and children's issues, health and mental health, civil rights, gay and lesbian issues, and issues affecting the disabled. Practical topics studied include professional liability, provision of legal testimony, and advocacy.

## Prerequisites \& Notes

SASW 201 or PSYC 100 or 105

Credits: 3

## SASW 450 - SASW Internship

Supervised placement in selected professional agencies.

## Prerequisites \& Notes

For Social Work SASW 357, 407 and permission of the instructor. For Sociology SASW 317, 318, 415 and permission of the instructor, For Anthropology SASW 202, 311 and permission of the instuctor

Credits: 3 to 15

## SASW 460 - Senior Synthesis

Senior-level integration of conceptual and methodological frameworks and skills.

## Prerequisites \& Notes

For social work students: SASW 357, 407, 318 or permission of the instructor

Credits: 3

## SASW 490 - Independent Study

A rigorous investigation of a subject area within the department.

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted

Credits: 1 to 3

## SASW 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor.

## Prerequisites \& Notes

Introductory course in the student's major, e.g. SASW 201, 202 or 251

Credits: 1 to 3

## SEFE 200 - Introduction to Education

This course is designed to introduce the student to the field of education. Topics covered include: the role of the teacher, structure and organization of schooling, and current issues and concerns relating to education.

## Prerequisites \& Notes

Sophomore class standing. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the

Credits: 3

## SEFE 230 - Production and Utilization of Instructional Technology

Selection, utilization and production of instructional materials. Equipment operation via self-instruction in the Media Lab.

## Prerequisites \& Notes

Sophomore class standing.Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the

Credits: 3

## SEFE 270 - Educational Measurements, Assessment and Evaluation

Objectives for testing and evaluation; construction and analysis of classroom tests for evaluative and diagnostic purposes; construction and application of non-test tools for assessment, including portfolios; statistical analysis of
testing and measurement data; use of standardized tests in the classroom; and the use of computers.

## Prerequisites \& Notes

SEFE 200, CEDP 248. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teach

## Credits: 3

## SEFE 280 - Cultural Minorities in Education

A study of multi-cultural issues in American education with emphasis on the theory and practice relating to race, religion, ethnicity, social class, gender, age, and exceptionality.

## Prerequisites \& Notes

Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teacher Education Policy

Credits: 3

## SEFE 311 - Teaching of Mathematics in the Middle School

Students will explore curriculum models, teaching materials, technology and best teaching practices for enhancing middle school students' mathematical understanding.

## Prerequisites \& Notes

Admission to College of Education

Credits: 3

## SEFE 319 - Teaching of Social Studies in Secondary Schools

The development and refinement of teaching competencies particularly related to the teaching of secondary school social studies: history, political science, economics, geography and sociology/anthropology. The course will emphasize the development of social studies in the school, teaching methodology (post and current), the unit approach to teaching social studies, media uses and preparation of media materials, teaching techniques, professional organizations, and teaching aids and materials such as computers, television and simulation programs.

## Prerequisites \& Notes

24 credits in area of specialization. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as spec

Credits: 3

## SEFE 320 - Teaching of Language Arts in Secondary Schools

The development and refinement of teaching competencies particularly related to instruction in secondary school language arts, including English. The course also emphasizes English curriculum, teaching strategies and methodologies and the use of media in content presentation.

## Prerequisites \& Notes

24 credits in area of specialization. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA
prerequisites also apply as spec

Credits: 3

## SEFE 323 - Teaching World Languages

Theory and methodology for teaching world languages throughout the K-12 curriculum.

## Prerequisites \& Notes

SEFE 200, 24 credits in area of specialization. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also app

Credits: 3

## SEFE 324 - Methods for Teaching English as a Second Language and Bilingual Education

A course designed to acquaint the prospective teacher at any level with the methodology used to teach English to native speakers of other languages. Also acquaints students with the specialized procedures used when teaching in bilingual classrooms (any two languages) on any level.

## Prerequisites \& Notes

One year of college language study or placement in 201. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites

Credits: 3

## SEFE 329 - Methods of Instruction in Secondary Conent Areas

This course is designed to provide prospective secondary teachers with the opportunity to design and teach lessons using basic instructional models and teaching strategies. The role of reading, writing, and oral communication in the teaching/learning of secondary content is also addressed. Following microteaching episodes, students reflect upon and analyze the teaching processes to clarify instructional values and to encourage critical inquiry.

## Prerequisites \& Notes

Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teacher Education Policy

Credits: 3

## SEFE 349 - Teaching of Science in the Middle School

Students will explore curriculum models, teaching materials, technology and best teaching practices for enhancing middle school students' understanding in science.

## Prerequisites \& Notes

Credits: 3

## SEFE 380 - History and Philosophy of Education

Critical exploration of the philosophical issues and historical antecedents that form the bases for past and current American educational practice in a multicultural society.

## Prerequisites \& Notes

SEFE 200, 270, CEDP 248, 342 Junior Standing. Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply

Credits: 3

## SEFE 420 - American Education in the Twenty-First Century: A Comparative Perspective

American educational policies and practices are viewed within a global context. Undergraduate students, who will become parents and taxpayers, are introduced to the core social and educational institution in developed or developing societies: the school.

## Prerequisites \& Notes

Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teacher Education Policy

Credits: 3

## SEFE 426 - Practicum in Secondary Education

Designed to give secondary education majors a pre-student teaching field experience in a secondary classroom under the supervision of a university faculty member.

## Prerequisites \& Notes

Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teacher Education Policy

Credits: 1

## SEFE 455 - Student Teaching - Secondary Education

Under the guidance of a cooperating teacher and university supervisor, students engage in two eight- week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

## Prerequisites \& Notes

Note: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; professional conduct standards, minimum overall QPA, and major QPA prerequisites also apply as specified in the Teacher Education Policy. Prerquisites: SEFE 200,230,270,311 or 319 or 320 or 323 or 324 or $349,329,426$, \& CEDP

Credits: 12, 9, 6,3

## SPAN 101 - Spanish Language \& Culture I

A broad and practical working foundation in the language.

Credits: 3

## SPAN 102 - Spanish Language \& Culture II

A broad and practical working foundation in the language.

## Prerequisites \& Notes

SPAN 101 or the equivalent.

Credits: 3

## SPAN 103 - Spanish Language \& Culture III

A broad and practical working foundation in the language.

Prerequisites \& Notes
SPAN 102 or the equivalent.

Credits: 3

## SPAN 200 - Intermediate Spanish Grammar

A course designed to provide a review of basic Spanish grammar, emphasizing areas of difficulty in learning Spanish as a foreign language, and to introduce grammatical concepts not covered in previous studies.

Prerequisites \& Notes
SPAN 103 or equivalent

Credits: 3

## SPAN 201 - Communicating in Spanish

A functional course in speaking and writing Spanish, stressing everyday vocabulary and structure. Some grammar review.

Prerequisites \& Notes
SPAN 103 or the equivalent

Credits: 3

A study of selected Spanish literary works, emphasizing the persons and ideas influencing Spanish and foreign literatures. The course will be given in English; no knowledge of Spanish required. For non-Spanish majors or minors.

Credits: 3

## SPAN 220 - Reading in Spanish

An introduction to reading in Spanish at the intermediate level.

Prerequisites \& Notes
Spanish 103 or equivalent

Credits: 3

## SPAN 300 - Spanish Grammar Review

An intermediate grammar review and composition course emphasizing the basic structures of Spanish.

Prerequisites \& Notes
SPAN 200 and 201 or 220

Credits: 3

## SPAN 301 - Intermediate Spanish Communication

Development of communication skills through a variety of activities in contexts likely to be encountered in the target culture.

Prerequisites \& Notes
SPAN 200 and 201 or 220

Credits: 3

## SPAN 302 - Communication in Spanish for the Elementary Classroom

This course is designed to offer the elementary education major specific language skills necessary for effective communication in the elementary education classroom. (open only to Ed majors).

## Prerequisites \& Notes

SPAN 201

Credits: 3

## SPAN 303 - Business Spanish

Designed to acquaint the student with the necessary vocabulary, linguistic knowledge, and language skills related to Hispanic foreign trade, commerce, and office procedures.

Prerequisites \& Notes
SPAN 200, 201 and SPAN 300 or 301

Credits: 3

## SPAN 305 - Spanish Civilization

A study of the history of Spain and of important components of its culture, such as art, architecture, and daily life.

## Prerequisites \& Notes

6 Spanish credits at the 200 level

Credits: 3

## SPAN 306 - The Civilzation of South America

Development of Latin-American civilization and aspects of the culture of Latin-American countries.

## Prerequisites \& Notes

6 Spanish credits at the 200 level

Credits: 3

## SPAN 307 - U.S. Spanish-Speaking Minority Cultures

A study of the cultural background of the members of the Spanish-speaking minorities in the United States, especially the Chicanos, Puerto Ricans and Cubans.

## Prerequisites \& Notes

6 Spanish credits at the 200 level

Credits: 3

## SPAN 308 - The Civilzation of Mexico and Central America

A study of the development of the civilization of Mexico and Central America and important aspects of their culture, such as art, architecture, and daily life.

Prerequisites \& Notes
6 Spanish credits at the 200 level

Credits: 3

## SPAN 309 - Hispanic Civilizatin for the Elementary Classroom

This course, designed for the Elementary Education major focuses on themes of Hispanic civilization and culture appropriate for inclusion in the elementary classroom.

Prerequisites \& Notes
6 hours at the 200 level; open to elementary education majors only

Credits: 3

## SPAN 315 - Spanish Study Abroad

This course is designed for students who wish to study the Hispanic society firsthand. Students will study the culture, literature, history, art, and other issues concerning the country where the program is offered.

Prerequisites \& Notes
6 Spanish credits at the 200 level
Credits: 3

## SPAN 318 - Hispanic Literary Heritage

Students will read legends, fables, poems which are part of the Hispanic tradition and which are told to or read by young children and younger adolescents.

## Prerequisites \& Notes

6 hours at 200 level or placement

Credits: 3

## SPAN 330 - Spanish Literature - Gen. Of 98 to Present

A study of major writers genres and literary movements of Spain in this period.

Prerequisites \& Notes
220 and 200 or 201

Credits: 3

## SPAN 332 - Spanish-American Literature - 20th Century and Beyond

A study of major writers genres and literary movements of Latin American in this period.

Prerequisites \& Notes
220, 200 or 201

Credits: 3

## SPAN 335 - Women in Hispanic Literature

A study of Hispanic women authors and of Hispanic women as literary characters in Hispanic literature.

Prerequisites \& Notes
For Spanish credit, SPAN 220 and 200 or 201 or the equivalent. For non-Spanish credit, no prerequisite

Credits: 3

## SPAN 340 - Introduction to Translation I

Introduction to the techniques of translating varied material from Spanish to English and vice versa with attention to cultural forces affecting translation.

Prerequisites \& Notes
SPAN 300

Credits: 3

## SPAN 350 - Spanish Linguistics and Phonetics

An introduction to general linguistics and the practical application of linguistics to the study of Spanish. Analysis and practice of the sound system of the foreign language.

Prerequisites \& Notes
6 Spanish credits at the 200 or above level
Credits: 3

## SPAN 400 - Advanced Spanish Grammar

An advanced course in the study of Spanish grammar and usage.

Prerequisites \& Notes
9 Spanish credits at the 300-level including SPAN 300
Credits: 3

## SPAN 401 - Advanced Oral Communication

This course will provide the opportunity for advanced students to improve their aural comprehension and their conversational abilities in Spanish.

## Prerequisites \& Notes

9 Spanish credits at the 300-level including SPAN 301
Credits: 3

## SPAN 431 - Spanish Literature - Medieval to 18th Century

A study and analysis of the most important works of representative Spanish authors of this period.

## Prerequisites \& Notes

9 hours at the 300 -level including 300 and 318,330 or 331

Credits: 3

## SPAN 432 - Spanish-American Literature Pre-Columbian to 19th Century

A study and analysis of the most important works of representative Spanish-American authors of this period.
Prerequisites \& Notes
9 hours at the 300 level including 300 and 318,330 , or 331

Credits: 3

## SPAN 490 - Independent Study

Students have an opportunity to study selected areas in greater concentration. The nature of the topic selected and its treatment are determined in consultation with the instructor. credits)

## Prerequisites \& Notes

Permission of the instructor, departmental chairperson, and dean of the college where the study will be conducted

Credits: 1 to 3

## SPED 100 - Introduction to Special Education

This course is designed to meet the needs of pre-service teachers who seek teacher certification in elementary education, secondary education, physical education, health education, music education, or environmental education. The course is required for the minor in exceptionalities.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

Credits: 3

## SPED 105-Americans with Disabilities

This course will provide background for understanding how disabling conditions may handicap a person in terms of jobs, marriage, and family life, housing and transportation and citizenship. The course stresses how everyone is involved in determining the success or failure of the disabled in society. An historical overview of society's treatment of the disabled will be contrasted with recent legislation and the emerging roles of the disabled in American society. The impact of special education on the disabled person, the parents, siblings, employers, neighbors, and peers will be presented.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

## Credits: 3

## SPED 202 - Educational Aspects of Physical Disabilities

A description of the learner characteristics, programs and techniques used in educating physically handicapped/brain injured persons. This course is designed to teach the entry-level skills for teaching the PHBI child. The student will be able to organize classroom instruction for the PHBI child.

## Prerequisites \& Notes

SPED 100. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Educat

Credits: 3

## SPED 203 - Educational Aspects of ED/LD

This course describes the characteristics of learning and/or behaviorally disordered (LBD) children, the programs designed to serve their needs and the role and function of the teachers who work with them.

## Prerequisites \& Notes

SPED 100. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Educat

Credits: 3

## SPED 204 - Educational Aspects of the Mental Retardation

This course is designed to describe the psychological and educational characteristics that distinguish retarded pupils, as revealed in current research. The course covers the nature of mental retardation, characteristics of learning, educational programs and current issues. It features an emphasis on the interactive roles of school and society in identifying and delivering services to the mentally retarded.

## Prerequisites \& Notes

SPED 100. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Educat

Credits: 3

## SPED 212 - Life Management for Persons with Disabilities

Preparation of the teacher to plan for meeting the major developmental needs of disabled persons from infancy to adulthood; emphasis on early childhood education, career education to include: preparation for occupation, homemaking, social leisure skills, parent involvement and use of community resources to accomplish these objectives.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

Credits: 3

## SPED 250 - Seminar in CPAD

This course focuses on the multi-dimensional role of service provider to individuals with exceptionalities. In addition to hand-on experience with service agencies, CPAD students enrolled in this course will interact with service providers, supervisors, related service personnel, parents, and care takers.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

Credits: 3

## SPED 302 - Educational Strategies: Learners with Developmental Disabilities

The learner will identify the critical components of an educational program for persons who have mental retardation classified as moderate, severe, or profound including: curricular areas, effective teaching techniques, appropriate materials, team approaches, ancillary services, parental involvement and inclusionary practices. Includes a lab of three contact hours per week with students who have severe and/or multiple disabilities.

## Prerequisites \& Notes

SPED 100, 202, 203, 204. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the

Credits: 3

## SPED 306 - Educational Strageties: Severe Learning and Behavior Disorders

Techniques and educational strategies for teaching severely disturbed persons and juvenile delinquents for preparation for teaching in public and private residential institutions, as well as in special classes, resource rooms or homebound instruction.

## Prerequisites \& Notes

Prerequisities: SPED 100, 202, 203, 204; Corequisites: SPED 312, 313, 314, 400. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, an

Credits: 3

## SPED 312 - Educational Strategies for Learners with Mild Disabilities

This course is designed to prepare future teachers in creating the most appropriate programs for students with mild disabilities. Course content will include current best practice strategies to facilitate effective instruction in inclusive settings.

## Prerequisites \& Notes

Prerequisities: SPED 100, 202, 203, 204; Corequisites: SPED 306, 313, 314, 400. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, an

Credits: 3

## SPED 313-Classroom Management Strategies

This course is designed to familiarize students with the various behavioral problems they may encounter in special education classrooms. Suggestions are given for ameliorating these problems, as well as for successfully organizing the classroom and classroom routine.

## Prerequisites \& Notes

Prerequisities: SPED 100, 202, 203, 204; Corequisites: SPED 306, 312, 314, 400. NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional
conduct standards, an

Credits: 3

## SPED 314 - Educational Assessment of Exceptional Children

This course enables students to develop the skills necessary for making an educational assessment of disabled children in order to plan an educational program to improve their learning. Prescription writing follows assessment and is concerned with identifying the varying needs of the children and the appropriate experiences and materials necessary to promote further development in learning.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

Credits: 3

## SPED 315-Special Education Issues in Diverse Secondary Classrooms

This course is designed to familiarize secondary education majors with the various behavioral problems they may encounter in the inclusive classroom. Suggestions are given for ameliorating these problems, as well as successfully organizing the classroom and classroom routine. Three units of study will be explored. The three units are: 1) Classroom management with a focus on dealing with students with special needs, 2) Legal issues for secondary teachers, 3) Impact of exceptionalities in inclusive settings.

Credits: 3

## SPED 400 - Special Education Practicum

This course focuses on skills in consultation, collaboration and learning to prepare the pre-service teacher for the multidimensional role of today's special educator. In addition to hands-on experience in classrooms, students enrolled in this course will interact with special educators, regular educators, parents and resource personnel. Application of teaching techniques and materials to handicapped children in small group instruction under faculty supervision; to provide the student with an opportunity for experience in the special education classroom prior to and in preparation for the student teaching assignment.

## Prerequisites \& Notes

SPED 100, 202, 203, 204, 212, 302. Concurrent enrolled in 300, 306, 312 and 313 required. A minimum QPA of 2.8 in certification courses and overall, and approval of a practicum application are also required. NOTE: Admission to and retention in the teacher

Credits: 3

## SPED 455 - Student Teaching - Special Education

Under the guidance of a cooperating teacher and university supervisor, students engage in two eight- week assignments on a full-time basis in specified school districts and attend scheduled seminars. Supervisors assign additional requirements.

## Prerequisites \& Notes

NOTE: Admission to and retention in the teacher education program are prerequisites for teacher education
coursework; minimum overall QPA, professional conduct standards, and major QPA prerequisites also apply, as specified in the Teacher Education Policy

Credits: 12, 6, 3

## SPMT 150 - Practical Application

Provides students with early-on structured observations, micro-teaching experiences and seminars to enhance their awareness, understanding and comprehension about persons of all ages in public and private schools, sport facilities, sport and fitness agencies. SPMT 150 may be repeated to a maximum of 4 credits in different experiences. This is a Theory and Technique Course.

Credits: 1

## SPMT 194 - Introduction to Sport Management

This course is an introduction to the field of sport management. Career options and managerial content will be reviewed. Foundation studies of sport, including history, philosophy, and professional skills, will be discussed. This is a Theory and Technique Course.

Credits: 3

## SPMT 269 - American Sport in the 21st Century

This course is designed to give the students an understanding of the internal and external factors that shape sport in American culture. This course will analyze how sport mirrors societal changes and how sociological phenomena affect participation and behavior. This is a Theory and Technique Course (open to Sport Management majors only).

Credits: 3

## SPMT 286 - Sport Communication

This course is intended to provide students with a comprehensive understanding of communication and communication techniques that managers use to achieve excellence in sport organizations. Focus will be placed on public relations, as well as techniques for improving the communication skills of each student in an organized sport setting. Students will receive in-depth exposure to, (a) theories underlying the use of public relations in sport, (b) new technologies in sport communication, (c) desktop publishing in sport organizations, (d) sport organizational communication techniques, and (e) sport media relations. This is a Theory and Technique Course (open to Sport Management majors only).

## Prerequisites \& Notes

PESM 194, 294 or permission of the instructor

Credits: 3

## SPMT 294 - Sport Management and Ethics

This course is designed to integrate the concepts learned from the foundation courses in management as they apply to management areas of sport and sport agencies. The ethical strategies of sport management will be emphasized in all management decisions. This is a Theory and Technique Course (open to Sport Management majors only).

## Prerequisites \& Notes

SPMT 194 or permission of the instructor
Credits: 3

## SPMT 394 - Sport Marketing

Sport Marketing is designed to apply marketing principles to the area of sport, sport events and sport products. Marketing strategies including sales, promotions and advertising of sport will be emphasized. This is a Theory and Technique Course (open to Sport Management majors only).

## Prerequisites \& Notes

SPMT 150, 194, 294, 286, MRKT 230 or permission of the instructor
Credits: 3

## SPMT 450 - Sport Management Internship

This course provides students with the opportunity to apply sport and fitness career-oriented skills in public, commercial, and private agencies. The internship is designed to be an in-depth experience. This is a Theory and Technique Course (open to Sport Management majors only).

Credits: 12

## SPMT 494 - Sport Management Senior Seminar

This course is designed for the senior Sport Management student, this course will examine topics dealing with sport finance management, sport law, sport facility management, and time and stress management. Field trips to sport agencies will be required. This is a Theory and Technique Course (open to Sport Management majors only).

Prerequisites \& Notes
SPMT 150, 194, 294, 286, 386, and advanced standing or permission of instructor

Credits: 3

## SPMT 506 - Sport Facility and Event Management

This course is designed to assist the sport management student in acquiring the necessary knowledge and skills needed to manage a sport facility and to plan a complete sporting event. This is a Theory and Technique Course (open to Sport Management majors only).

## Prerequisites \& Notes

SPMT 150, 194, 294, 286 or permission of the instructor

Credits: 3

## SPMT 515 - Diversity Issues in Sport Management

This course is designed to explore the persistent causes of pervasive racism and sexism in sport as it relates to the sport management field. This is a Theory and Technique Course (open to Sport Management majors only).

Credits: 3

## SPMT 586 - Sport Law

The course will demonstrate how constitutional law, contract law, tort law, labor and anti-trust law, and discrimination apply to the sport industry. In addition the course will provide a fundamental understanding of the court system and how legal issues are decided. This is a Theory and Technique Course (open to Sport Management majors only).

Prerequisites \& Notes
SPMT 150, 194, 294 and 286

Credits: 3

## SPMT 599 - Sport Management Research Management

A study of research methodology and terminology in Sport Management entailing a critical analysis of available research. Specific attention is directed to formal written communication and oral presentation skills. This is a Theory and Technique Course (open to Sport Management majors only).

## Prerequisites \& Notes

SPMT 150, 194, 294 and 333

Credits: 3

## THEA 131 - Fundamentals of Acting

An introduction to the theory and practice of acting.

Credits: 3

## THEA 132 - Stagecraft

Fundamentals of modern set construction, stage lighting, properties, and costume practice. Students assist with current productions in laboratory sessions.

Credits: 3

## THEA 141 - Introduction to the Theatre

An introduction to the elements of the theatre: acting, playwriting, directing, producing, design and technology.
Attention to the ways in which theatre springs from the nature of the community in historical as well as contemporary settings. A lecture course; no performance skills required.

Credits: 3

## THEA 151 - Rehearsal and Production

Supervised experience in theatre performance and stagecraft by acting or crew participation in one Department of Theatre production. May be taken for credit four times. Prospective actors will have to participate in a competitive audition.

## Prerequisites \& Notes

Permission of the instructor

Credits: 1

## THEA 215 - Drawing/Drafting/CAD

Principles and techniques used for the creation and implementation of theatrical designs. Introduction to design elements and techniques, drawing, rendering, and computer-aided drafting. Emphasis on set, costume, lighting and property designs.

## Prerequisites \& Notes

Permission of the instructor

Credits: 3

THEA 222 - Acting II

Intermediate-level course designed to continue the actor training begun in THEA 131. Emphasis on realistic acting techniques.

## Prerequisites \& Notes

THEA 131

Credits: 3

## THEA 235 - Costume Technology

Basic techniques of constructing costumes for the stage, emphasizing sewing, pattern making and cutting, draping. Includes the study of fabrics, millinery, and accessories.

Credits: 3

## THEA 269-Playwriting

An introduction to the fundamentals of playwriting, including clear storytelling, character development, scene structure and style. The particular demands of writing in a theatrical medium, as distinct from film, television or novel, will be emphasized.

Credits: 3

## THEA 281 - Survey of Dramatic Literature

Analysis and discussion of some of history's most celebrated works of dramatic literature, ranging from classic Greek drama through to contemporary works. Texts will be examined within the historical context of the cultures that produced them, and in light of their respective theatrical conditions, performance styles, etc. Emphasis will also be placed on various methods of textual analysis.

Credits: 3

## THEA 322 - Acting Technique

An intensive focus on one or more of the following: role preparation, scene study, physical disciplines of acting. Approach varies from offering to offering. May be repeated for credit three times.

## Prerequisites \& Notes

THEA 222 and permission of the instructor

Credits: 3

## THEA 324 - Stage Makeup

Theory, practice, and materials of stage make-up. Practical application is mandatory and extensive; students will analyze various characters and design makeup for them.

## Prerequisites \& Notes

THEA 131,151

Credits: 3

## THEA 328 - Acting Shakespeare

An advanced-level course designed to provide the student with tools for the analysis and performance of the plays of Shakespeare.

## Prerequisites \& Notes

THEA 222 and permission of the instructor

Credits: 3

## THEA 329 - Shakespeare Tour

An ensemble composed of actors and technicians, selected by audition and interview, performing Shakespeare-based scripts in the community and region. May be repeated twice for credit.

## Prerequisites \& Notes

Prerequisites: THEA 328 or permission of instructor.

Credits: 3

## THEA 330 - Voice and Movement for the Actor

Introduction to disciplines of voice and movement essential for the well-prepared actor. Emphasis will be on performance rather than theory.

Prerequisites \& Notes
Prerequiste: THEA 131

Credits: 3

THEA 332 - Advanced Stagecraft

Advanced methods and materials of stagecraft: emphasis on furniture, metals, projected scenery, unusual rigging situations, hydraulics, computer applications, and special effects.

Prerequisites \& Notes
THEA 132

Credits: 3

## THEA 333 - Scene Design

The principles and application of design for stage, emphasizing sketches, diagrams, drafting, and model making.

## Prerequisites \& Notes

THEA 215 or permission of the instructor
Credits: 3

## THEA 334 - Stage Lighting

The theory and practice of stage lighting as practiced in modern theatre.

## Prerequisites \& Notes

THEA 215 or permission of the instructor
Credits: 3

## THEA 335 - Costume Design and History

A survey of costume history from the ancient world to the present with an emphasis on social, political, religious, and technological conditions. The process of costume design will be explored using the principles of variety and order, character analysis, period research, and the elements of design.

## Prerequisites \& Notes

THEA 215 or permission of instructor.
Credits: 3

## THEA 337 - Directing

The theory and practice of directing for the modern theatre.

Prerequisites \& Notes
THEA 131, 132, 281, and one section of 151

Credits: 3

## THEA 345 - Stage Management and Safety

Safe and effective production management on the modern stage. Safety education in shop, performance, and public spaces.

## Prerequisites \& Notes

THEA 132
Credits: 3

## THEA 355-Projects in Theatre

The study and performance of a major role in a Department of Theatre production, or participation in a production as a crew head with significant responsibility, or planning and execution of a study of moderate scope in the history, literature, or criticism of the theatre. May be taken for credit four times for a maximum of 6 credits.

## Prerequisites \& Notes

Junior standing and permission of the instructor
Credits: 1 to 2

## THEA 393 - History of Theatre Design and Architecture

A review of the history and evolution of scene, costume, lighting, prop and sound design for the theatre. Course will also examine the evolution of theatre spaces, from the outdoor theatre of the Ancient Greeks to traveling wagon stages of the medieval period to modern architectural trends. The course will examine non-western forms of theatre such as aboriginal and African theatre as well as western world theatre traditions.

## Prerequisites \& Notes

THEA 281
Credits: 3

## THEA 394 - Theories of Acting and Directing

A history of the art, craft and theories of acting. Also, a historical investigation into the role of the "director" in premodern theatre and the evolution into its present predominant place in contemporary theatre.

## Prerequisites \& Notes

THEA 281 or permission of instructor
Credits: 3

## THEA 425-Professional Theatre Practice

A study of the working conditions of the professional actor, designer, technician, and director in the contemporary theatre. Preparation for effective career development.

Prerequisites \& Notes
Junior standing
Credits: 3

## THEA 450 - Internship

Supervised placement in a working theatre situation off campus.

## Prerequisites \& Notes

Extensive and successful experience in theatre performance on campus, 2.000 QPA overall and in all theatre courses attempted, and permission of the department's curriculum committee.

Credits: 3 to 12

## THEA 490 - Independent Study

A faculty-supervised project in an advanced area of theatre studies carried out independently by a qualified upper-class student.

Credits: 1 to 3

## THEA 498 - Interactive Theatre

Interactive Theatre is designed for actors, teachers, artists, counselors and educators to build community using interaction, dialogue, improvisation, movement and composition work. Participants investigate social and political issues to create a dialogue and facilitate interaction within and between groups of people. Students participate through performance, problem solving and experimentation. Class culminates in a public performance of class material.

Credits: 3

## THEA 498 - Selected Topics

The in-depth examination of a specific topic. The nature of the topic selected and its treatment determined in consultation with the instructor. May be repeated for credit provided the topic varies substantially from all previous registrations.

## Prerequisites \& Notes

permission of the instructor

Credits: 1 to 3

## WMST 115 - Introduction to Women's Studies

Introduction to Women's Studies is an interdisciplinary course that offers a foundation for understanding the diverse strands of the female experience, focusing on the strengths and conditions which simultaneously unite and divide women.

Credits: 3

## WMST 415 - Feminist Perspectives in the Disciplines

This course will explore feminist approaches to pedagogy and research in the humanities, social sciences, and natural sciences, highlighting how such approaches reshape and redirect the ways knowledge is constructed as well as the attendant, transformed results.

## Prerequisites \& Notes

Prefer to have students with some background in women's studies)

Credits: 3

## WMST 450 - Internship

Professional experiences, such as working with the Girl Scouts or state National Organization for Women (NOW), or working in a women's center or abuse/sexual assault center, that will allow students to either apply or function within a feminist framework to understand the complexity of women's lives and contribute to women's opportunities.

## Prerequisites \& Notes

Completion of at least six credits of coursework approved for the women's studies minor
Credits: 3 to 12

## Faculty \& Administration

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- Council of Trustees
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- Academic Affairs
- Finance and Administration
- Student Life
- University Advancement
- Slippery Rock University Faculty
- Faculty
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Executive Director for University Advancement Edward R. Bucha, Ph.D.
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Dr. Nicholas Papanikolaou
Chemistry Department
Dr. Leona Parascenzo
Nursing
Dr. Mary Alice Paul
Elementary Education/Early Childhood

| Mr. Charles L. Brochetti | Dr. Gary Pechar |
| :---: | :---: |
| Counseling \& Educational Psychology | Exercise and Rehabilitative Sciences |
| Mrs. Leah Brown | Dr. William Polk |
| Library | Elementary Education/Early Childhood |
| Mr. Paul Bruno | Dr. Mack Porter |
| Physical Education | Counseling and Educational Psychology |
| Dr. Beverly Buchert | Mr. Fred Powell |
| Georgraphy, Geology and the Environment | Physical Education and Sport Management |
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| Elementary Education/Early Childhood | Elementary Education |
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| Elementary Education/Early Childhood | Physical Education |
| Dr. Kent O. Bushnell | Dr. Louis Razzano |
| Environmental Geosciences | Associate Provost and Associate Vice President for Academic Affairs |
| Dr. Hannah K. Case |  |
| Modern Languages and Cultures | Dr. Herb. F. Reinhard |
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| Dr. William F. Chapman |  |
| Geography, Geology and the Environment | Dr. Anne Liedel-Rice |
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| Counseling and Educational Psychology | Dr. Joseph H. Riggs Communication |
| Dr. Gerald Chesin |  |
| Curriculum/Instruction | Dr. Carolyn Rizza |
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| Library | Dr. James N. Roberts |
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| Geography/Environmental Studies | Mrs. Lucy A. Sack |
|  | Dance |
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| Parks and Recreation/Environmental Education | Dr. W.G. Sayre <br> Chemistry and Physics |
| Mr. James Egli |  |
| Physical Education |  |


| Mr. William Elliott | Mr. Blase S. Scarnati |
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|  | Dr. William Taylor Sociology/Anthropology/ Social Work |


| Ms. Jan Hudak | Mr. Martin Thompson |
| :---: | :---: |
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| Computer Science | Modern Languages and Culture |
| Mr. Stanley Johnson | Dr. Genevieve M. Tvrdik |
| Parks and Recreation/ Environmental Education | Biology |
| Dr. Thomas M. Kandl | Dr. Lawrence Upton |
| Elementary Education/Early Childhood | Counseling and Educational Psychology |
| Mr. Elwood Karwand | Mr. Hubert Voltz |
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| Dr. Brian J. Kearney | Dr. Donald H. Voss |
| Physics | Psychology |
| Dr. Bradley F. Keith | Dr. B. Wayne Walker |
| Physical Education | Dean, College of Education and Human Service Professions |
| Dr. Donald Kelly |  |
| History | Dr. Raymond V. Wallace |
|  | Theatre |
| Mr. Stanley Kendziorski |  |
| Allied Health | Mr. Edward Walsh |
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|  | Communication |
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| Physical Education | Dr. Theordore Walwik |
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| Dr. Patricia M. Koehler |  |
| Special Education | Dr. Albert Ward |
|  | Environmental Geosciences |
| Dr. Edward Kopper |  |
| English | Dr. Donald Watson |
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| Ms. Akiko Kotani |  |
| Art | Dr. Edgar Wells |
|  | Philosophy |
| Dr. Parameswar Krishnakumar |  |
| Business | Dr. Marie Wheaton |
|  | Physical Education |
| Dr. Irwin Kuhr |  |
| Communication | Ms. Ruth Wilhelm |
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Mr. Robert M. Love
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Mr. Joseph Marks
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Mr. Richard D. Maxwell
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Dr. Clair W. McClure
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Dr. James McFarland
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Dr. Mary Agnes McKay
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Dr. J. William McKay
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Dr. Joanne L. McKeag
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Dr. Patricia Zimmerman
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Rutter, Brian, Outdoor Adventure Coordinator
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Todaro, Angela, Assistant Director of Residence Life
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Varnish, Julie, Coordinator of Student Activities
Indiana University of Pennsylvania, B.S., M.A.
Vigliotti, Michael, Coordinator of University Union Operations/Residence Life
California University of Pennsylvania, B.S., M.Ed.
Yeamans, James, Coordinator of Aquatic Operations and Programs
Slippery Rock University, B.S., Indiana University, M.S.

## Athletic Personnel

Abney, Robertha, Associate Athletic Director
South Carolina State College, B.S.; University of Pittsburgh, M.Ed.; University of Iowa, Ph.D.
Brown, Blaine, Assistant Baseball Coach
St. Mary's University, B.S.

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Campagna, Victor P., Assistant Football Coach
Lock Haven University, B.S.; Slippery Rock University, M.Ed.
Crunkleton, David A., Head Golf Coach
Slippery Rock University, B.A.
Delporto, Derek, Head Wrestling Coach
Slippery Rock University, B.S.
Fotia, Gemma, Head Cheerleading Coach
Foster, John, Assistant Football Coach
Plymouth State College, B.S.; West Chester University, M.S.
Gonzalez, Sergio, Assistant Women's Soccer Coach
Salve Regina University, B.S.; Slippery Rock University, M.S.
Heilman, Laurel, Head Women's Basketball Coach
Slippery Rock University, B.S., M.Ed.
Herlihy, Noreen, Head Women's Soccer Coach
Mercyhurst College, B.S.; Slippery Rock University, M.S.
Hetrick, Andrea, Athletic Trainer
Lock Haven University, B.S.; Bloomsburg Univeristy, M.S.
Horseman, Bill, Assistant Football Coach
Thiel College, B.S.
Jackson, Tavares, Assistant Women's Basketball Coach
University of Minnesota-Crookston, B.S.; Bemidji State, M.S.
Johnson, Vashion, Head Softball Coach
Morris College, B.A.; United States Sports Academy, M.S.
Lokash, Laurie, Head Women's Volleyball Coach
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Lueken, Paul A., Director of Athletics
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Lutz, Shawn, Assistant Football Coach
West Virginia University, B.S.; Slippery Rock University, M.S.
Magley, Jeff, Assistant Men and Women's Cross Country and Track and Field Coach
Westmont College California, B.A.; University of Northern Colorado, M.A.
Marhefka, John, Head Men's Basketball Coach
Hiram College, B.A.; Armstrong Atlantic, M.S.
Martin, Dwayne, Assistant Football Coach
West Virginia Wesleyan, B.S
Meredith, Matt, Head Men's and Women's Tennis Coach
Slippery Rock University, B.A.
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Messer, Jeffrey, Head Baseball Coach<br>Springfield College, B.S.; Oklahoma City University, M.A.T.<br>Mihalik, George J., Head Football Coach<br>Slippery Rock University, B.S., M.Ed.; West Virginia University, Ed.D.<br>Osborne, Carrie, Assistant to the Athletic Director<br>Duquesne University, B.A.; Slippery Rock University, M.S.<br>Patterson, Rich, Head Athletic Trainer<br>Alfred University, B.S.; Hofstra University, M.S.<br>Papa, John, Head Men and Women's Cross Country and Track and Field Coach<br>Slippery Rock University, B.S., M.S.<br>Roach, Steve, Interim Assistant to the Athletic Director<br>Indiana University of PA, B.S.; Slippery Rock University, M.S.<br>Thompson, Matt, Head Men's Soccer Coach<br>Slippery Rock University, B.S.<br>Walton, Joseph D., Assistant Football Coach<br>University of Pittsburgh, B.S.<br>Yeamans, James, Head Men's and Women's Water Polo Coach<br>Slippery Rock University, B.S.; Indiana University of Pennsylvania, M.S.

## Financial Aid

The Office of Financial Aid is responsible for the coordination of sources of financial assistance for undergraduate and graduate students at Slippery Rock University. The majority of financial aid offered through the Office of Financial Aid is based on the overall financial need of applicants. Both state and federal financial aid sources are coordinated through this office. The Office of Financial Aid also provides information about scholarship opportunities. A detailed listing of aid programs is available at www.sru.edu/pages/633.asp.

Click a link to be taken to the entry below.

- How Do I Apply For Financial Aid?
- Financial Aid Programs
- How is Eligibility Determined?
- What Can Financial Aid Cover?
- What Is An Expected Family Contribution (EFC)?
- What Is My Eligibility For Financial Aid?
- How Do I Receive Financial Aid Funds?
- Academic Progress for Financial Aid
- Enrollment Status Definitions
- Satisfactory Progress
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- Appeal Process
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## How Do I Apply For Financial Aid?

The Free Application for Federal Student Aid (FAFSA) must be completed in order to apply for financial aid available for attendance at Slippery Rock University. Students are able to complete the FAFSA beginning January 1 of the year preceding their next year of enrollment in college. It is recommended that the application be completed after January 1 and before May 1. The federal school code for Slippery Rock University is 003327 , a code that is required on the FAFSA.

In addition, students interested in receiving assistance from either the Federal Stafford Loan or PLUS program must submit the appropriate loan promissory note at least six to eight weeks in advance of their first date of attendance at SRU.

## Financial Aid Programs

Financial aid at Slippery Rock University includes grant, loan, and employment programs. Scholarship opportunities for students are listed in the "University Scholarships" section of this catalog.

Federal Pell Grant - Pell Grants are federal funds available to undergraduates with exceptional financial need; the amount of the grant is based on a student's enrollment, cost and financial need.

Federal Supplemental Educational Opportunity Grant (FSEOG) - FSEOG funds are grant funds available to undergraduate students with a high degree of financial need. Students may be eligible for this grant if they already qualify for the Federal Pell Grant.

Pennsylvania State Grant - The Pennsylvania Higher Education Assistance Agency (PHEAA) provides grant assistance to eligible Pennsylvania residents. PHEAA Grant funds are awarded to undergraduate students on the basis of financial need.

Federal Work Study (FWS) - Employment based on financial need may be available to eligible students. FWS is a parttime employment program. Students employed by FWS receive a paycheck on a bi-weekly basis and are paid at least minimum wage. FWS job opportunities are located throughout the campus. Available FWS positions are publicized through the Office of Career Services.

Federal Perkins Loan - This is a low interest loan that is offered by SRU through the use of federal funds. Typically, this loan is awarded to undergraduate students who demonstrate a high degree of financial need. Repayment of this loan begins nine months after the student ceases to be enrolled on at least a half-time basis. The SRU Perkins Loan Office can be contacted for additional information regarding repayment of this loan.

Federal Stafford Loan - This is a long-term, low interest loan that students may elect to use to assist them with their educational expenses. The amount of loan and type of loan available is dependent upon the individual student's costs, resources, year in school, and financial need.

A student may either qualify for a Subsidized or Unsubsidized Federal Stafford Loan. Subsidized loans are offered to students who demonstrate financial need; these do not require repayment of principal or interest while the student remains enrolled at least halftime. In contrast, unsubsidized loans require either the repayment of interest only (on a quarterly basis) or the capitalization of interest during periods of enrollment. The student officially enters repayment of an Unsubsidized or Subsidized Federal Stafford Loan following a grace period after graduation or cessation of at least half-time enrollment. Contact the Office of Financial Aid for further information regarding repayment of Federal Stafford Loans.

Federal PLUS Loans - Both parents of dependent students and graduate students may borrow up to the cost of financial aid through the use of this Federal loan program.

Other State Grants - Several states allow their students to use state grant funds to attend colleges outside of their home state. Out-of-state students should contact their state grant agency in their home state for more information on eligibility guidelines.

## How is Eligibility Determined?

Students qualify for most financial aid based on their financial need. A student's financial need is based on a simple formula:

Cost of Attendance

- Expected Family Contribution
$=$ Financial Need


## What Can Financial Aid Cover?

The Office of Financial Aid calculates an average cost of attendance for each student based on their program of study and their in-state or out-of-state status. Typically, the cost of attendance consists of costs for tuition, fees, room, board, books, travel and other associated educational costs.

## What Is An Expected Family Contribution (EFC)?

The EFC is calculated through the completion of the Free Application for Federal Student Aid. This figure reflects the Federal estimate of what a family and/or student can afford to contribute toward a year of college.

## What Is My Eligibility For Financial Aid?

The level of financial need determines the amount of eligibility that a student has for financial aid. It is used by the Office of Financial Aid to determine eligibility for specific programs. An award letter listing eligibility for financial aid is sent to each student after the determination of financial need.

Students or families who experience hardship due to disability, death, decrease in income, loss of benefits, etc., should contact the Office of Financial Aid. A review of their eligibility for financial aid may be performed based on their change in status.

Financial aid applicants may contact the Office of Financial Aid for specific program eligibility criteria.

## How Do I Receive Financial Aid Funds?

The Office of Student Accounts is responsible for disbursing all financial aid with the exception of the Federal Work Study Program. A student's financial aid, excluding Federal Work Study, is applied directly to contracted university charges (tuition, fees, room and board). Any excess funds will be refunded to the student according to the refund policies set forth by the Office of Student Accounts.

## Academic Progress for Financial Aid

The Higher Education Act of 1965 as amended by Congress mandates institutions of higher education to establish minimum standards of "satisfactory progress" for students receiving Federal financial aid. These standards apply to all Federal Title IV aid programs including the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Stafford Loans, Federal PLUS Loans and Federal Work-Study.

Regardless of whether the student had previously received Title IV financial aid, the minimum requirements for students to meet the University's definition of academic progress for Federal financial aid purposes are as follows:

## Enrollment Status Definitions for Purposes of Determining Satisfactory Progress

Full Time: Undergraduate students enrolled for at least 12 credits/semester and graduate students enrolled for at least 9 credits/semester are considered to be full-time.

Three-Quarter Time: Undergraduate students enrolled for at least 9 but less than 12 credits per semester are considered to be three-quarter time.

Half Time: Undergraduate and graduate students enrolled for at least 6 but less than 9 credits/semester are considered to be half-time.

## Process of Determining Satisfactory Progress

Each student will be measured for sufficient progress annually in May after spring grade processing. This evaluation will determine if the student has sufficient progress to be eligible for Title IV funding for the next financial aid award year. Students who have not met the minimum requirements will receive a letter informing them that they are not eligible for continued financial aid.

The standards of satisfactory progress have both a quantitative and qualitative measure that must be met. Slippery Rock University has established the following quantitative and qualitative standards that must be met:

Quantitative Measure (credits earned):

- Full time students must complete a minimum of 24 ( 18 if a graduate student) new credits by the end of each academic year.
- Three quarter time students must complete a minimum of 18 new credits by the end of each academic year.
- Half time students must complete a minimum of 12 new credits by the end of each academic year.
- Students enrolled less than half time must complete the number of credits for which enrolled by the end of each academic year.
Qualitative Measure (QPA):
- Students who have completed 2 academic years or its equivalent must have at least a 2.0 SRU cumulative quality point average (QPA) at the end of each academic year.
- Students who have not completed 2 academic years or its equivalent must have at least a 1.5 SRU cumulative quality point average (QPA) at the end of each academic year.
Graduate students must have at least a 3.0 SRU cumulative quality point average (QPA) at the end of each academic year.

January Admits : If an undergraduate student is admitted in January, that student must complete at least 12 credits for full time study ( 9 credits for three quarter time study, 6 credits for half time study and all credits for less than half time) and meet the minimum quality point average requirement to have continued financial aid eligibility. If the student is deficient in credits or quality point average, the student will receive a warning letter. Aid will be continued for the Fall

Semester, however, at the end of the Fall Semester, the student will be checked for the completion of the appropriate number of credits based upon the enrollment status and appropriate quality point average. Federal financial aid will be continued for those students who have met both requirements. Students who have not met both requirements will be notified of their ineligibility for Federal financial aid and informed of the options to regain eligibility.

Graduate students admitted in January who fail to meet QPA or credit requirements by the end of the Spring Semester will receive the same warning letter as listed above. Aid will be continued for the Fall Semester, however, progress will be evaluated again at the end of the Fall Semester.

Readmitted Students : If a student is readmitted to the University, satisfactory academic progress will be based on the student's previous attendance at SRU. Students who have not met the minimum requirements will be notified of their ineligibility for Federal financial aid and informed of the options to regain eligibility.

## Maximum Time Frame

Undergraduate students may receive Federal financial assistance for no more than $150 \%$ of the established length of their program of study. SRU has defined this maximum time frame as 6 years for full time students, 9 years for threequarter time students and 12 years for half-time students. A year consists of fall, spring and summer. The maximum time frame will be adjusted based on the student's enrollment status. Credits transferred from other institutions to SRU count toward the maximum time frame. A year for maximum time frame and credits transferred is defined as thirty-six credits. Students changing majors, pursuing a double major or pursuing a second undergraduate degree may be eligible for an extension of time on an individual review basis.

## Policy on the Return of Title IV Aid

The Financial Aid Office is required by federal statute to recalculate federal financial aid eligibility for students who withdraw, drop out, are dismissed, or take a leave of absence prior to completing $60 \%$ of a payment period or term. The federal Title IV financial aid programs must be recalculated in these situations.

If a student leaves the institution prior to completing $60 \%$ of a payment period or term, the financial aid office recalculates eligibility for Title IV funds. Recalculation is based on the percentage of earned aid using the following Federal Return of Title IV funds formula:

Percentage of payment period or term completed = the number of days completed up to the withdrawal date divided by the total days in the payment period or term. (Any break of five days or more is not counted as part of the days in the term.) This percentage is also the percentage of earned aid.

Funds are returned to the appropriate federal program based on the percentage of unearned aid using the following formula:
Aid to be returned $=(100 \%$ of the aid that could be disbursed minus the percentage of earned aid $)$ multiplied by the total amount of aid that could have been disbursed during the payment period or term.

If a student earned less aid than was disbursed, the institution would be required to return a portion of the funds and the student would be required to return a portion of the funds. Keep in mind that when Title IV funds are returned, the student borrower may owe a debit balance to the institution.

If a student earned more aid than was disbursed to him/her, the institution would owe the student a post-withdrawal disbursement which must be paid within 120 days of the student's withdrawal.

The institution must return the amount of Title IV funds for which it is responsible no later than 30 days after the date of the determination of the date of the student's withdrawal.

Refunds are allocated in the following order:

- Unsubsidized Federal Stafford Loans
- Subsidized Federal Stafford Loans
- Unsubsidized Direct Stafford Loans (other than PLUS loans)
- Subsidized Direct Stafford Loans
- Federal Perkins Loans
- Federal Parent (PLUS) Loans
- Direct PLUS Loans
- Federal Pell Grants for which a Return of funds is required
- Federal Supplemental Opportunity Grants for which a Return of funds is required
- Other assistance under this Title for which a Return of funds is required (e.g., LEAP)


## Special Grades and their use in Academic Progress Determination

I - Incomplete - Student will receive no credit for an "I" grade. If, however, the incomplete grade is resolved by the close of the following semester and a passing grade is received, the credits will be counted.

NC - No Credit - No credits received. W - Withdrawal - No credits received.
AU - Audit - No credits received. P - Pass- Student receives credits, but QPA is not affected.
X - No grade given - No credits received.

## Repeat of Course

The last grade earned is always used in calculating the QPA. If the student failed the course the first time but passes it the second time, the appropriate number of credits will be received after the second attempt. If, however, the student passed the course the first time, repeats it an attempt to improve the QPA but receives a failing grade, the appropriate number of credits will be deducted from the cumulative credits earned total. Maximum hours earned for any course cannot exceed the number of credits listed for that course in the catalog.

## Summer School

If a student is deficient in credits and/or QPA at the end of the academic year, the student may use the following summer to eliminate the deficiency. Summer work need not be completed at Slippery Rock; but students should be aware that:

1. Transient clearance must be obtained prior to taking any courses elsewhere if the credits are to be transferred back to SRU.
2. Only credits transfer back to Slippery Rock, grades do not. If the student's deficiency is in QPA, taking courses at another institution will not make up a QPA deficiency. The Office of Academic Records and Summer School must accept the credits in order to be counted towards satisfactory progress.

If the student chooses not to attend summer school to make up the deficiency, but opts instead to make up the deficiency during a subsequent semester, only credits successfully completed over and above the required minimum number of credits based on enrollment status will work toward eliminating the deficiency, however, financial aid will not be processed for that semester.

## Appeal Process

A student with mitigating circumstances is allowed to write an appeal in regard to an adverse satisfactory academic progress determination. In general, mitigating circumstances can include, but are not limited to, illness, injury, death of relative or friend, difficulties with accommodations for students with disabilities, and adversity due to unforeseen events. A written appeal may be submitted to the Academic Progress Committee c/o SRU Financial Aid Office. Please include all relevant documentation with your appeal and submit this prior to August 1st for the fall semester or before November 1st for the spring semester. You will receive a written response to your appeal. Appeals denied by the Academic Progress Committee may be reviewed upon request by the student by the Associate Provost for Enrollment Services

## Regaining Eligibility

If a student does not meet the satisfactory academic progress standards at the beginning of the academic year but later meets the standards at some point during the academic year, the student can be eligible to receive the Federal Pell Grant, FFEL funds, and if available, campus-based program funds beginning with the academic term during which the student first meets the academic progress standards. It is the student's responsibility to contact the Office of Financial Aid after they complete course work if it will allow them to regain eligibility for financial aid.

## PHEAA Grant

Academic progress requirements for the Pennsylvania State Grant are communicated directly to recipients with their state grant notification by PHEAA (Pennsylvania Higher Education Assistance Agency).

## Financial Aid for the Summer Term

Students may be able to qualify for financial aid for the summer term dependent upon their enrollment status, eligibility for aid, and the availability of financial aid funds. The following sources of financial aid may be available for the summer term: Federal Pell Grant, Pennsylvania State Grant, Federal Work Study, Federal Stafford Loans and PLUS. Students are encouraged to contact the Office of Financial Aid in the early spring regarding application procedures for financial aid for the summer term.

## Study Abroad Programs

SRU students may be eligible for financial aid funds to attend a study abroad program that is approved by SRU. Financial aid eligibility for study abroad programs is reviewed by individual request. The terms and conditions of the study abroad program have a direct impact upon the student's eligibility for financial aid. Students interested in financial aid for a study abroad program should contact the Office of Financial Aid.

## Statement of Rights and Responsibilities

## Rights

The student has the right to:

- Be considered for financial aid assistance; be notified of the financial aid decision; and if not awarded financial assistance, to be informed as to the reason for denial.
- Appeal financial aid decisions to the Associate Provost for Enrollment Services.
- Be informed of the financial aid programs available and the required application materials.


## Responsibilities

The student is responsible for:

- Submitting the appropriate application forms within published deadline dates.
- Using all refunds of financial aid funds for expenses related to the student's education.
- Following the requirements and repayment schedules of educational loan programs.
- Informing the Office of Financial Aid of all grants, scholarships, or other funds received for their educational costs from outside organizations.


## Additional Eligibility Criteria

In order to be considered for financial aid, student applicants must:

- Be a U.S. citizen or eligible non-citizen.
- Be registered with Selective Service (if required).
- Be working toward a degree or teacher certification at SRU.
- Not owe a refund on a federal grant or be in default on a federal educational loan.


## General Comments

- All aid programs require that the student make satisfactory academic progress as detailed in the financial aid section of the catalog.
- The financial aid office should be contacted for instructions when a major change in the family's financial condition occurs such as death, disability, retirement, or loss of job.)
- Students and families are encouraged to contact the financial aid office at 724-738-2044 or via e-mail at financial.aid@sru.edu with any questions they have about the financial aid information provided in this catalog.
- The information provided in this section was accurate at the time of publication. Fees, regulations, eligibility requirements, etc. are subject to change.


## University Scholarships

Slippery Rock University awards more than $\$ 600,000$ in academic scholarships annually. Students are encouraged to visit the financial aid website at www.sru.edu/pages/4986.asp for a current listing of freshman and upper class scholarships awarded through SRU. Students and families are encouraged to contact the financial aid office (724-7382044) if they have any questions about academic scholarship opportunities.

## Scholarships That Are Available

- A Craig Succop Metalsmithing Scholarship (Art)
- J. Kevin Woods Memorial Scholarship (Instrumental Music Major)
- A. P. Vincent ('13) Science Scholarship
- Academic Affairs Scholarship
- Accounting Department Scholarship
- African American Alumni Scholarship
- African American Caucus Scholarship
- Alan and Patti Offstein/Furniture Galleries Scholarship
- Alicia Stackhouse Kopp ('86) Scholarship
- Allie Heid Brandt (1902) Memorial Scholarship
- Allied Health Scholarship
- American Federation of State County and Municipal Employees
- American legion Post 393 Scholarship
- Ann Liedel-Rice Urban Award
- Ann T. Bicknell Memorial Scholarship
- Anna Brua Williams ('26) Scholarship
- Anthony Francis ('88) Scholarship
- Aqua Achievement Award
- Area Student Scholarship Fund
- Art Department Scholarship
- Arthur A. Bolla Memorial ASSE Scholarship
- Asian Studies Scholarship
- Association of Pennsylvania State, College \& University Faculty Scholarship
- Athletic Training Scholarship
- Band Scholarship (Music)
- Barry K. Thompson ('87) Scholarship
- Barry Welsch ('73) Family Scholarship
- Biology Honors Scholarship
- Blase S. and Mary L. Scarnati Scholarship
- Board of Governors Scholarship
- Bob \& Laurie Mollenhauer Scholarship
- Bob ('33) and Betty ('32) Smiley Scholarship (Physical Education)
- Bonnie Winder Scholarship (Music)
- Bruce Witek ('79) Memorial Scholarship (Parks \& Recreation)
- Butler County Symphony Association Scholarship
- Campus Side Apartments Scholarship
- Captain Jim Unterwagner Scholarship (Sociology/Social Work)
- Carl ('49) and Norma Watson ('48) Laughner Scholarship
- Carl and Louise Woodling Scholarship (English or English Education)
- Carlton F. Dresden Memorial Scholarship
- Jack C. Dinger Award (Special Education)
- James ('50) and Gay Dull Scholarship (Instrumental Music Major)
- James A. Hughes Scholarship
- James E. Winner, Jr., Family Scholarship (Business Administration)
- James P. Gillen Memorial Scholarship
- James Steel Memorial Scholarship (Biology)
- Jamie Minoski Scholarship for Special Education Majors
- Janice Sharek Hogue ('72) Memorial Scholarship (Mathematics)
- Jim Stracka ('80) Scholarship in Computer Science
- Joe Hickey ('81) Scholarship
- Joe Kolodski Scholarship
- John and Deborah Boczar Honors Scholarship
- John ('35) and Helen Williams Endowed Scholarship (Education)
- John and Kathryn Conway Symphony Scholarship (Music: Strings)
- John and Mary ('43) Taylor Endowed Scholarship (Education)
- John and Mildred Megan ('30) O'Brien Scholarship
- John O. Stoner Scholarship
- Joseph R. Love Scholarship
- Joseph S. \& Eva Puntureri Memorial Scholarship (Computer Science, Math, Science, or Safety Science)
- Joyce ('76) Patterson Scholarship
- Julia Warhola Scholarship
- Katherine M. Moore ('75) Memorial Fund (Health Education)
- Kay M. Hunt ('83) Nursing Scholarship
- Kay Wolford Endowment for Elementary Education Majors
- Kenneth Esker ('38) \& Ruth Madalyn ('38) Harris Scholarship (English or English Educ.)
- Kenneth L. Wilcox ('89) Scholarship)
- Kenneth M. O'Toole Memorial Scholarship (Marketing)
- Kids First Endowed Scholarship
- Kimberly Forrest Health Scholarship
- Kings of New Castle Internship-Scholarship (Accounting)
- Kraus Scholarships
- Kris Chapin Memorial Flute Scholarship (Music: Flute)
- Carolyn Greco ('70) Scholarship
- Carolyn Williams Physical Education Scholarship
- Catherine Morsink Scholarship
- Catherine Schaeffer Memorial Fund (Special Education)
- Chad Williamson Memorial Scholarship
- Charles \& Ruth Nibling Brooker Scholarship (Exercise Science)
- Charles A. Zuzak Scholar/Artist Award (College of Humanities, Fine, and Performing Arts)
- Charles B. Hamilton ('84) Art Scholarship
- Charles M. Bennett Memorial Fellowship (Counseling \& Ed. Psyche)
- Charles S. and Mary Coen Scholarship (College of Health, Environment, and Science)
- Charles Sheetz ('74) Scholarship
- Cheryl Iversen ('79) Scholarship
- Christopher Reeve Paralysis Foundation Scholarship (Adapted Physical Education)
- Class of '43 Anniversary Scholarship (Education)
- Class of '57 Scholarship for Promising Educators (Education)
- Claudia and Donald Graham Physical Therapy Fellowship (Physical Therapy)
- Colette S. Garrison ('53) Scholarship
- College of Business, Information, and Social Sciences Dean's Scholarship
- College of Education Dean's Diversity Scholarship (Education)
- Communications Scholarship (Communications)
- Connel Ashmore Baker, Jr., Scholarship
- Constantine N. Stroumbakis Scholarship (Secondary Education)
- Counseling \& Educational Psychology Graduate Scholarship
- CPAD Practicum (Special Education)
- Dale Liken ('38) Scholarship
- Darrell J. Hess ('54) Endowed Scholarship
- David \& Victoria Knopp Scholarship
- David Czapor ('02) Scholarship (Education Math Minor)
- Dean ('89) and Monica Piccirillo Scholarship (Finance)
- Dean V. Camp ('80) Scholarship
- Kurt Heinz ('76) Scholarship
- Leo I. Shapiro Memorial Scholarship (History, Public Administration, Political Science)
- Leona Parascenzo Nursing Scholarship
- Lisa Graham Hanrahan ('68) Scholarship (Elementary, Physical, or Secondary Education)
- Lisa McCaskey Scholarship
- Louis D. and Panagiota Pappan Scholarship
- Louis Razzano Scholarship (English or English Education)
- Louis Rossi ('50) Education Scholarship (Elementary Education)
- Lucy Isacco Sack ('67) Dance Scholarship for Summer Study
- Lucy Isacco Sack ('67) Dance Scholarship
- M. Clair and Marie Swope Scholarship
- M. Kate Brennan Music Education Scholarship (Music Education)
- Mabel Eichler Vincent Scholarship (Theatre)
- Madeline Farnen Stoops Scholarship (Education)
- Madrigal Dinner Scholarship (Music: Voice)
- Maggie Meise ('44) Fellowship (Business)
- Manocha School of Business Scholarship
- Marching Rockets-Band Scholarship (Music)
- Maree McKay/Esther Smiley ('22) Academic Alumni Scholarship
- Margaret Minor-Stone Scholarship (Education)
- Mario ('84) \& Seeme ('85) Moreira Accounting Scholarship
- Mario ('84) \& Seeme ('85) Moreira Communication Scholarship
- Marjorie L. Christy Maguire ('37) Fellowship (Physical Therarpy)
- Marjorie Stephenson Scholarship (Arts, Humanities, Education, and Social Services)
- Mark A. Shiring Teacher Eduction Fund (Elementary, Secondary, Special Education)
- Martha and John Gault Scholarship (Art or Art Education)
- Martha Green ('73) Scholarship
- Mary P. Wodiska Memorial Scholarship
- Math Department Scholarship
- Mathematics Award
- McKelvey Scholars Fund
- McPherson Family Scholarship
- Meiping Cheng Memorial Scholarship
- Merle Jan Moses Crawford ('79) Scholarship (Special Education)
- Michael J. Estocin '54 Memorial Scholarship
- Dennis Cousins ('69) Scholarship
- Diane Breidenstein Scholarship
- Don ('51) and Terry ('52) Phillips Scholarship (Education)
- Donald Hindman ('57) Scholarship (Chemistry or Physics)
- Donald Shields Kelly ('56) Fund (History)
- Donald T. Stauffer Award (Special Education)
- Donald Vanecek Memorial Scholarship (Physical Therapy Major - Art Minor)
- Donna \& Bob ('51) McMullen International Scholarship
- Dr. and Mrs. Arthur William Phillips Scholarship
- Dr. Carl Thomas McGary ('83) Scholarship)
- Dr. Charlotte H. Shapiro Scholarship (Education)
- Dr. Eben E. Bass Scholarship (Education or English Education)
- Dr. Hal ('60) and Betty ('61) Wingard Scholarship (CHES and PE Teaching)
- Dr. Jayne E. Craig ('85) Memorial Art Scholarship
- Dr. Joanne McKeag ('55) Scholarship (Physical Education or Dance)
- Dr. John N. Anderson Biology Scholarship
- Dr. Leona Parascenzo Fund (Nursing)
- Dr. Martin Luther King, Jr., Speech Competition
- Dr. Robert Marcus ('61) Scholarship
- Dr. Stephen C. ('80) and Susan V. Coulon Scholarship (Physical Education)
- Dr. Stephen J. Curry Scholarship (English)
- Dr. Thomas W. Gaither Scholarship (Biology)
- Dwight and Jean Baker Memorial Scholarship (Music)
- Earn to Learn Fellowships (Education)
- Eberly Family Scholarship
- Edith Davis Eve Foundation Scholarships
- Edna C. Rohwedder Community Service Memorial Scholarship
- Eisaman ('27) Alumni Scholarship
- Elaine Enfonde ('90) Scholarship
- Elaine Phillips Award (Special Education)
- Eleanor Heaney Sullivan Scholarship
- Elinor Jeffrey ('79) Scholarship (Nursing)
- Emma Guffy Miller Scholarship (Political Science)
- Environmental Geoscience Scholarship
- Michael Sharp ('83) Scholarship (Accounting)
- Mihal Skarupa Memorial Art Scholarship
- Mike Alan Starker ('82) Scholarship (Environmental Studies)
- Minnie Patton Staymen Foundation Scholarship
- Minority Affairs Scholarship
- Modern Languages and Cultures Scholarship (Major or Minor)
- Music Therapy Scholarship
- Nate and Irene Maruca Education Scholarship
- National City "Investing in Pennsylvania's Future" Scholarship Program
- Olive E. McElravy Wharton ('08) Memorial Scholarship (Elementary Education)
- O'Malley Scholarship (English)
- Park Ranger Scholarship (Parks \& Recreation Resource Management Major)
- Paul F. Rizza Scholarship (Environmental Studies or Geography)
- Philip J. Kennedy Scholarship (Accounting)
- Physics and Pre-Engineering Scholarship Fund
- Pres. Herb. F. Reinhard Leadership \& Activity Scholarship Fund
- Printmaking Scholarship (Art)
- Professional Graphic Communications Scholarship-Internship (Computer Science or Business)
- Quality Aggregates Inc. Internship-Scholarship (Geography, Geology and The Environment)
- Ralph Emerson Greasley Scholarship
- Ranbar Technology Scholarship (Chemistry)
- Raymond E. Carothers ('73) Honors Scholarship
- Rev. Wil Hadden Act 101 Award
- Rhoda E. Taylor Endowed Scholarship (Biology, Chemistry, Geology, or Physics)
- Richard and Mary Shoemaker Scholarship (Elementary Education)
- Richard Tillack ('68) Memorial Scholarship (Science or Secondary Education Major, First Preference)
- Ritts Scholarship
- Robert ('69) and Judith ('69) Frederick Scholarship (Education)
- Robert A. Davis Scholarship (Environmental Studies or Geography)
- Robert H. Coulson ('56) Scholarship (Education or Theater Preference, but all Majors)
- Robert H. McCollum ('52) Scholarship (International Studies)
- Eugene L. Boyer ('50) Parks \& Rec Scholarship for Outstanding Student
- Flash ('70) and Linda Yarger Scholarship (Geology)
- Francis J. Dixon Family Scholarship Program
- Frank A. Pugliese Rock Scholarship (Biology)
- Frank and Nancy Ross Memorial Scholarship (Art)
- Fred ('53) and Mary Roby Scholarship (Exercise Science)
- Gail Sabanosh ('76) Scholarship
- Gary Pechar Exercise Science Award
- General Music Scholarship Fund (Music)
- Genevieve M. Tvrdik Scholarship (Biology)
- Geology Alumni Scholarship
- George Smith Memorial Fund (Mathematics and Natural Science)
- George W. Bentel Memorial Scholarship
- Governor's School Scholarship
- Grace H. "Arky" Vaughan ('50) Scholarship (Physical Education Teaching Major)
- Grace H. "Arky" Vaughan ('50) and Ruth V. Coon ('52) Scholarship (Phys. Ed. Tcg. Major)
- Graduate Portfolio Award (Special Education)
- Grady W. and Helen Magee Cooper Scholarship
- Grove City County Market Scholarship
- Hall ('71) Scholarship
- Hallie Dugan Smith ('22) Scholarship Award (Elementary Education)
- Hazel Andrews Reed ('24) Fellowship in Physical Therapy
- Health and Human Services Scholarship
- Helen Brua Gettig ('27) Memorial Scholarship (Education)
- Helen R. Ferguson ('48) Scholarship
- Hockenberry Memorial Scholarship (Education)
- Honors Program Scholarships
- Howard and Florence Meyer Scholarship
- Howard L. and Margaret Rehm ('40) Headland Scholarship
- Hungry Minds Scholarship
- Hunkler Computer Science Scholarship (Computer Science, Info. Systems, Info. Technology)
- International Experience Award (Elementary Education)
- Robert Leffingwell Scholarship (Communication)
- Robert Macoskey Memorial Scholarship (Sustainable Systems Graduate Student)
- Robert N. Aebersold Scholarship
- Robert Yeckley ('74) Scholarship
- Roger Panella Scholarship
- Ronald Smith ('71) Champion International Scholarship)
- Rose ('69) and Dale E. Kaufman Scholarship
- Rose Ricci ('81) Nursing Scholarship
- Russell E. ('41) and Alma B. ('29) Hemphill Memorial Scholarship (Education)
- Russell E. Wright ('23) Scholarship
- Ruth Vaughan Coon ('52) Scholarship (Physical Education Teaching Major)
- Ryan F. Chandler Memorial Fellowship (Physical Therapy)
- Sadie Lindey Carey ('27) Scholarship (Education)
- Samuel G. Sava ('53) Scholarship (Elementary Education)
- Sara Belle Eakin Riddle Memorial Scholarship (Elementary Education)
- Scholarship for Academic Excellence in Secondary Education
- School of Business Advisory Council (Business)
- Sheila I. Drohan ('74) Scholarship (Exercise Science)
- Slovak American Fund for Education
- Special Education Alumni Scholarship
- SRU Academic Scholarship
- SRU Scholarship at Carrollton High School
- SRU Scholarship at Sharon High School
- Stan Kendziorski International Student Scholarship
- Sue Shuttleworth Music Therapy Scholarship
- Susan J. Morimando ('99) Scholarship (Elementary Education, first preference)
- Sylvan H. Cohen Scholarship (Political Science Major)
- Terry Steele Jazz Scholarship (Music: Jazz)
- The Carol Holland ('86) Scholarship for International Students
- The First National Bank of Slippery Rock Scholars Program
- Thomas H. John Scholarship (Biology)
- Timothy Trautman ('73) Scholarship)
- Triangle Tech Scholarship (Applied Science)
- Twyla Hord Special Education Award (Special Education)
- International Student Scholarship (International Students)
- Irving P. Rosenthal Accounting Scholarship
- Ivona Kemp Natural Living Scholarship (Sustainable Systems Grad Student)
- University Academic Scholarship Program
- Verizon Scholarship-Bell Atlantic (Computer Science or Technology)
- Watson Family Scholarships (Biology, Education, or Undeclared Slippery Rock High School)
- William ('50) and Connie Halttunen Scholarship
- William Alexander Ralston ('01) Award for Academic Achievement (Biology or Physical Science
- Wilson Family Scholarship (FYRST Student)
- Wolves Club of Coraopolis Den \#9 Scholarship
- Wolves Club of New Castle Den \#1 Scholarship
- Yardley Scholarship

Scholarships are awarded based on various criteria. Visit the SRU scholarships web page at www.sru.edu/pages/4986.asp for scholarship descriptions, criteria, and application processes.

Due to the generosity of many individuals and corporations, new scholarship opportunities are established on an ongoing basis. Therefore, additional scholarships may be available but not listed above. For updated information refer to the scholarship web page at www.sru.edu/pages/4986.asp. Scholarship information listed in this catalog is subject to change without notice.

Athletic Scholarships are administered by the Intercollegiate Athletic Department and awarded by the coaches of each particular sport. Contact the specific coach at the Intercollegiate Athletic Office, 102 Morrow Field House, 724-7382021.

Army ROTC scholarships are available at Slippery Rock University that cover tuition, fees, books, and a monthly cash allowance. Contact the SRU Military Science Department at 724-738-2019 for details.

## Veterans Affairs

The financial aid office coordinates all paperwork for veterans or dependents of veterans who are eligible for Department of Veterans Affairs educational benefits. Qualified individuals should apply at least six weeks prior to the first day of classes. An original application for benefits and certified copy of DD214 (discharge paper), or VA form 2384 (Notice of Basic Eligibility), or copy of Kicker contract may be required. The Office of Financial Aid should be contacted for additional information regarding DVA educational benefits, financial aid, tutorial assistance, and credits for military service and specific forms. General information is available in the SRU Veterans Benefits pamphlet (available through the Financial Aid office), or at www.sru.edu/pages/2686.asp.

## Majors and Minors

## Accounting (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in accounting. The program in accounting at Slippery Rock University serves to develop its majors into professional accountants who can function effectively in public accounting, government, and industry. The curriculum focuses on the development of the student's business and accounting knowledge as well as key communication and computing skills. Emphasis is placed on passing the professional certification examinations (CPA, CMA, CFM, and CIA). Student professional growth is
encouraged and enhanced through participation in the student chapter of the Institute of Management Accountants and through participation in the internship program in the School of Business.

A certificate in accounting program provides the opportunity for individuals with or without a baccalaureate degree to advance their employment potential by developing expertise and technical skills in the challenging and rewarding field of accounting. The accounting major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 66

Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Accounting Major - Credits: 24

- ACCT 230 - Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309- Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3
- ACCT 412 - Accounting Seminar Credits: 3
- ACCT 413 - Advanced Accounting I Credits: 3

Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)

Degree Completion in Four Years Accounting (BSBA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 9
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MRKT 230 - Principles of Marketing Credits: 3

Junior Year - Total Hours: 30

- Accounting Elective - Credits: 3
- Liberal Studies Elective - Credits: 6
- ACCT 230 - Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309 - Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 251-Organizational Behavior Credits: 3


## Senior Year - Total Hours: 30

- Liberal Studies Elective - Credits: 12
- ACCT 411 - Auditing Theory and Practice Credits: 3
- ACCT 412 - Accounting Seminar Credits: 3
- ACCT 413-Advanced Accounting I Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3


## ACT 101

Funded by the Pennsylvania Department of Education, the ACT 101 Program at SRU provides academic support services to 250 students meeting eligibility guidelines of residency and income. This program is designed to give students an opportunity to acquire and enhance skills necessary for academic success in higher education. Serving firstyear, transfer, and upper-level students, the ACT 101 Program provides orientation to the university, academic advisement in exploratory and supplemental advisement across majors, registration preparation sessions, peer assistance, tutorial services, majors exploration, linkage with university programs and services, and program advocacy. With a focus on student achievement, the program and university coordinate the ACT 101 financial award of $\$ 500$ for tuition to program students demonstrating academic success and persistence in their first two semesters. Program students may also qualify for priority registration and are able to access selected textbooks through the Act 101 Textbook Loan Services. If you are interested in ACT 101 Program services and/or guidelines, please contact the program at 724-738-2012 or act101@sru.edu.

## Applied Science (BS)

## (120 Credits)

This degree completion program is designed for students who have already earned an associate degree from an accredited two-year institution, including proprietary and technical schools. The associate degree program must include a technical major of at least 35 credit hours. A maximum of 67 credit hours completed at a two-year, technical or proprietary institution may transfer to Slippery Rock University. Up to a maximum of 45 credits earned at the sending institution shall be used to meet liberal studies requirements.

The achievement of an associate degree certifies the adequacy and completeness of the technical training and clearly defines applied science as a transfer program. Once accepted as candidates for the bachelor of science with a major in applied science, students must complete the following requirements:

## Program Requirements - Credits: 120 (including transfer credits)

## Professional Block

Students must complete the 12 -credit professional block designed to prepare them to assume leadership roles. Note: Prerequisites for core courses include: for PSYC 210 any 3 credit Psychology course, and for COMM 318 senior status and familiarity with personal computers.

These courses are:

- COMM 318 - Professional Presentation Credits: 3
- MGMT 250 - Principles of Management Credits: 3


## One of the Following:

- COMM 315-Organizational Communication Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
or
- PSYC 210 - Introduction to Industrial-Organizational Psychology Credits: 3

And one of the Following:

- PHIL 324 - Environmental Ethics Credits: 3
or
- PHIL 325-Medical/Health Care Ethics Credits: 3
or
- PHIL 326 - Business Ethics Credits: 3


## A Student is Required to Have One of the Following:

The Applied Technology Management Specialization:

- Two MGMT Electives at the 300 level or higher
- ACCT 205-Accounting for Decision Makers Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or
- ECON 202 - Principles of Microeconomics Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Or A University Approved Minor.

Or An Advisor Approved Specialization with a Minimum of 15 Credits.

At least one course from each of the following groups is recommended:

Computer Science Group:

- CPSC 142 Credits: 3 (Prerequisite is ASSD 110)
- CPSC 144 Credits: 3 (Prerequisite is ASSD 110)
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3

Writing group:

Two writing intensive courses.

- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 306 - Advanced Technical and Scientific Writing Credits: 3 (Prerequisite is ENGL 205)
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3


## Army ROTC

## The Four-Year Program:

The four-year program is divided into two parts: the Basic Course and the Advanced Course.
The Basic Course is usually taken during the first two years of college and covers such subjects as customs, traditions and organizations of the service, national defense, military history, and leadership development. In addition, a variety of outside social and professional enrichment activities are available. All necessary ROTC textbooks, uniforms, and other essential materials for the Basic Course are furnished at no cost. After completion of the Basic Course, students who have demonstrated the potential to become an officer and who have met the physical and scholastic standards are eligible to enroll in the Advanced Course. (Note: There is no military service obligation associated with taking any Basic Course electives. All electives earn academic credit.)

## Military Science

## Freshman Year - Total Hours: 6

- MS 100-The American Military Experience Credits: 3
- MS 102 - Principles of Leadership Credits: 3


## Sophomore Year - Total Hours: 6

- MS 201 - Basic Military Skills Credits: 3
- MS 202 - Intermediate Military Skills Credits: 3


## Junior Year - Total Hours: 8

- MS 301 - Fundamentals of Tactical Operations Credits: 4
- MS 302 - Advanced Military Skills Credits: 4


## Senior Year - Total Hours: 8

- MS 401 - Leadership Dimensions and Concepts Credits: 4
- MS 402 - Officership and the Profession of Arms Credits: 4


## The Two-Year Program:

The two-year program is designed for junior students and community college graduates, students at four-year colleges who did not take ROTC during their first two years of school, or students entering a two-year post-baccalaureate or graduate course of study.

To enter the two-year program, students must first attend a fully-paid five-week Leadership Training Course (LTC), normally held during the summer between the sophomore and junior years of college. At LTC, students learn to challenge themselves physically and mentally, and to build their confidence and self-respect.

After they have successfully completed LTC, students who meet all necessary enrollment requirements may enroll in the Advanced Course.

Students who have attended basic training/AIT also qualify for the two-year program.

## Army ROTC Scholarship/Financial Assistance

Army ROTC offers two-year, three-year, and four-year scholarships on a competitive basis to the most outstanding students who apply. Three and two-year scholarships are awarded to students already enrolled in college. Students who attend the LTC in the two-year program may compete for two-year scholarships.

Each scholarship pays for college tuition and required educational fees and provides a specified amount for textbooks. Each scholarship also includes subsistence allowance of $\$ 2,500-\$ 4,000$ for every year the scholarship is in effect.

All cadets in the Advanced Course receive a subsistence allowance of $\$ 3,500-\$ 4,000$ for each of the two years (This is not in addition to the subsistence allowance provided to scholarship recipients), as well as pay for attending the fiveweek Leadership Development and Assessment Course during the summer between their Junior and Senior years.

## The Simultaneous Membership Program

Students who have not been awarded an ROTC scholarship can get a head start on their military careers and their future through the Simultaneous Membership Program (SMP). This program allows students to be members of the Army National Guard or the Army Reserve and Army ROTC at the same time.

SMP students are paid at the rate of at least a Sergeant (E-5) for their guard or reserve training assemblies, plus the aforementioned allowance from the ROTC Advanced Course. SMP students may also be eligible for additional federal and state educational benefits. They serve as officer trainees in their guard or reserve units and, under the close supervision of a commissioned officer, perform duties commensurate with those of a Second Lieutenant.

Cadets who successfully complete the SMP program graduate with a commission as a Second Lieutenant. Once commissioned, they may continue to serve in their Army National Guard or Army Reserve units, or they may apply for active duty in the U.S. Army.

Students can be in the SMP program all four years at college. They will be paid at the rate of Sergeant for only the last two years.

## Requirements for Enrollment

The general requirements for enrollment in Army ROTC stipulate that students be accepted as a regularly enrolled university student and be a citizen of the United States. Veterans and JROTC graduates may receive exemptions from the basic course as approved by the Professor of Military Science (PMS). For continuation in ROTC during the junior and senior years, students must have a 2.500 grade point average in their academic area, have successfully completed requirements for the Basic Course, pass a physical examination, and be accepted by the PMS. Advanced Course students must agree in writing to complete the junior and senior years.

## Art (BA)

## Requirements for the Major - Credits: 39

## Required Courses

## Art History - Credits: 6

- ART 225-Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## Studio Courses - Credits: 33

- 9 credits of a modern language or competency at the 103 level
- ART 105 - Basic Studio Drawing Credits: 3


## 3 Credits From:

- ART 100-2-D Design Credits: 3
- ART 101 - 3-D Design Credits: 3


## 6 Credits From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 9 Credits Selected From:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3


## 6 Credits Selected From:

- ART 305-Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312-Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## 6 Credits Selected From:

- ART 405-Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Degree Completion in Four Years Art (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Language 101 - Credits: 3
- Liberal Studies - Credits: 9
- ART 100-2-D Design Credits: 3
- ART 101 - 3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3
- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 6
- Electives - Credits: 6
- ART 225 - Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3


## Choose 2 from the Following:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209-Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3


## Junior Year

- Language 103 - Credits: 3
- PESM Activity (2) - Credits: 2
- Liberal Studies - Credits: 13
- Electives - Credits: 3


## Choose 1 from the Following:

- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3

Choose 2 from the Following:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Senior Year

- Liberal Studies - Credits: 15
- Electives - Credits: 9

Choose 2 from the Following:

- ART 405-Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Art (BFA)

## Requirements for the Major - Credits: 75

## Required Courses

Art History - Credits: 6

- ART 225- Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## 6 Credits Selected From:

- ART 325 - North American Art History Credits: 3
- ART 335 - The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3

Art Seminar - Credits: 3

- ART 300-Art Seminar Credits: 3


## Studio Courses

6 credits Art electives 300/400 level ART classes

## 9 Credits Selected From:

- ART 100-2-D Design Credits: 3
- ART 101-3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3


## 9 Credits Selected From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 12 Credits Selected From:

- ART 206-Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209-Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 225 - Overview of Western Art Credits: 3


## 12 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309-Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## 9 Credits Selected From:

- ART 405-Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 433-Senior Project Design Credits: 3
- ART 434-Senior Project Digital Media Credits: 3


## 3 Credits Selected From:

- ART 425 - Senior Project Drawing Credits: 3
- ART 426 - Senior Project Painting Credits: 3
- ART 427 - Senior Project Photography Credits: 3
- ART 428 - Senior Project Printmaking Credits: 3
- ART 429 - Senior Project Metalsmithing Credits: 3
- ART 430 - Senior Project Sculpture Credits: 3
- ART 431 - Senior Project Fibers Credits: 3
- ART 432 - Senior Project Ceramics Credits: 3
- ART 433 - Senior Project Design Credits: 3
- ART 434 - Senior Project Digital Media Credits: 3


## Degree Completion in Four Years Art (BFA)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 3
- ART 100-2-D Design Credits: 3
- ART 101-3-D Design Credits: 3
- ART 105 - Basic Studio Drawing Credits: 3
- ART 225 - Overview of Western Art Credits: 3
or
- ART 226 - Overview of World Art Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Choose 3 from the Following:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3

Sophomore Year - Total Hours: 30

- ART Elective - Credits: 3
- Liberal Studies - Credits: 6
- ART 225 - Overview of Western Art Credits: 3
or
- ART 226 - Overview of World Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3

Choose 4 from the Following:

- ART 205 - Art Synthesis Drawing Credits: 3
- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209-Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3

Junior Year - Total Hours: 30

- PESM Activity (2) - Credits: 2
- Liberal Studies - Credits: 9
- Elective - Credits: 1
- ART 300-Art Seminar Credits: 3
- ART 325 - North American Art History Credits: 3
- ART 335- The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3

Choose 4 from the Following:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306-Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310-Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312-Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3

Senior Year - Total Hours: 30

- ART Elective - Credits: 3
- Liberal Studies - Credits: 12
- ART 325 - North American Art History Credits: 3
- ART 335-The Renaissance Tradition Credits: 3
- ART 345-Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3
- ART 425 - Senior Project Drawing Credits: 3
or
- ART 434 - Senior Project Digital Media Credits: 3

Choose 3 from the Following:

- ART 405 - Senior Studio Drawing Credits: 3
- ART 406 - Senior Studio Painting Credits: 3
- ART 407 - Senior Studio Photography Credits: 3
- ART 408 - Senior Studio Printmaking Credits: 3
- ART 409 - Senior Studio Metalsmithing Credits: 3
- ART 410 - Senior Studio Sculpture Credits: 3
- ART 411 - Senior Studio Fibers Credits: 3
- ART 412 - Senior Studio Ceramics Credits: 3
- ART 413 - Senior Studio Design Credits: 3
- ART 414 - Senior Studio Digital Media Credits: 3


## Athletic Training (BS)

"The virtues of the Athletic Training Faculty, Staff, and Students constitute the confidence I now possess for personal learning and my educating of others. Slippery Rock University served as the keystone necessary for me to achieve my goals in education, clinical experience, and sport injury research."

## Anthony House, ATC '05 UNLV Graduate Assistant Kinesiology/ATEP Administration

and abilities to provide care to athletes and the physically active within the six domains of athletic training practice. The Slippery Rock University Athletic Training Education Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Joint Review Committee on Educational Programs in Athletic Training. Students fulfilling the total 120 credit hours of academic program requirements will graduate with a bachelor of science degree in athletic training.

SRU sponsors a unique accelerated ATEP that graduates athletic training students in December of their senior (fourth) year. This is accomplished with a highly structured curriculum that is sequenced over three and a half (3.5) years or seven (7) semesters including six (6) required credits of therapeutic exercise in the summer between the student's sophomore (second) and junior (third) years. This "accelerated" program allows SRU's athletic training students to graduate a semester early, sit for the Board of Certification (BOC) credentialing examination before their peers at other universities and be more competitive for graduate assistantships, employment and seats in other medical preparation programs.

Upon formal acceptance into the professional strand of the ATEP, students must acquire and maintain athletic training student liability insurance and professional rescuer level first aid and cardiopulmonary resuscitation certifications. These are acquired in advance of enrollment in the clinical course Practicum in Athletic Training (ERS 387), which is taken four times over four consecutive semesters to total 12 credits. This is the equivalent of a 12 -credit internship. Instead of doing all coursework and then completing an internship, the athletic training student participates in his or her clinical experience under the direct supervision of an approved clinical instructor (certified athletic trainer or other medical professional) while taking the relevant coursework. Thus, there is immediate opportunity for application of theory to practice. Although most of the clinical experience takes place on-campus with SRU's certified athletic trainers and varsity athletic teams, all athletic training students are required to spend at least one rotation offcampus with one of our approved clinical instructors at an affiliate site. Athletic training students are required to provide their own transportation to and from the off-campus affiliate sites.

Athletic training students are active, dues-paying members of the SRU Athletic Training Association, National Athletic Trainers' Association (NATA), Eastern Athletic Trainers' Association (EATA), and Pennsylvania Athletic Trainers' Society (PATS). They often attend the annual conferences of those preprofessional organizations and participate in various field trips, professional medical affiliations, surgical observations, and physicians' clinics. Many athletic training students have pursued external internships with the assistance of the faculty. Some of these include internships with the Pittsburgh Steelers, Pittsburgh Pirates, New York Jets and the Wide World of Sports Complex at Disney World in Orlando, FL. Rock athletic training students are some of the most successful students in being awarded NATA and EATA sponsored scholarships.

Student-athletes participating in varsity sports sponsored by the SRU Athletic Department who are granted admission to the ATEP should make the program co-coordinators aware of their active participation in their respective sport. Although the ATEP faculty work very hard with the coaching staff to support student-athletes in their attempt to participate in varsity athletics while matriculating through the ATEP, success is dependent upon each student's ability to manage their time effectively while maintaining required standards of academic performance in the didactic (classroom) and clinical education portions of the ATEP. Because all sports are different and all sport seasons vary in time and intensity, not all student athletes will progress through the ATEP the same way. In order to meet the minimum standards of completion of the ATEP, student-athletes will be required to enroll one additional semester (4 years or 8 semesters total) or more to guarantee that a quality educational and clinical experience has been achieved and that all competencies and proficiencies have been successfully mastered.

## Additional costs related to the Athletic Training Education Program

| $\$ 200.00$ | Required/Approved Uniforms (Approximate) |
| ---: | :--- |
| 105.00 | NATA Membership Annual Dues (includes NATA, EATA \& PATS) |
| 10.00 | SRU Athletic Trainers' Association Annual Dues |
| 35.00 | Athletic Training Student Liability Insurance Annual Fee |
| 10.00 | Laboratory Fees (Approximate) |
| 10.00 | Laboratory/Class Manual Fees (Approximate) |
| 20.00 | Minimum for Transportation to off-campus clinical rotation (Cost dependent on location of assignment |

[range of 3 to 22 miles from SRU], cost of gas during specific semester of off campus assignment, and opportunities to car pool.)
*All costs are subject to change.

## Policy for Application to the Athletic Training Education Program

University acceptance to pursue the athletic training major does NOT guarantee admission into the professional strand of the ATEP.

## Technical Standards for the SRU Athletic Training Education Program

The ATEP at Slippery Rock University is a rigorous and intense program that places specific requirements and demands on the students enrolled in the program. An objective of this program is to prepare graduates to enter a variety of employment settings and to render care to a wide spectrum of individuals engaged in physical activity. The technical standards set forth by the ATEP establish the essential qualities considered necessary for students admitted to this program to achieve the knowledge, skills, and competencies of an entry-level athletic trainer, as well as meet the expectations of the program's accrediting agency (CAAHEP). All students must meet the following abilities and expectations. In the event a student is unable to fulfill these technical standards the student will not be admitted to the program.

Compliance with the programs technical standards does not guarantee a student's eligibility for the BOC credentialing examination.

## Candidates for selection to the Athletic Training Education Program must demonstrate:

1. The mental capacity to assimilate, analyze, synthesize, integrate concepts and problem solve to formulate assessment and therapeutic judgments and to be able to distinguish deviations from the norm.
2. Sufficient postural and neuromuscular control, sensory function, and coordination to perform appropriate physical examination using accepted techniques; and accurately, safely and efficiently use equipment and materials during assessments and the treatment of patients.
3. The ability to communicate effectively and sensitively with patients and colleagues, including individuals form different cultural and social backgrounds; this includes, but is not limited to, the ability to establish rapport with patients and communicate judgments and treatment information effectively. Students must be able to understand and speak with English language at a level consistent with competent professional practice.
4. The ability to record the physical examination results and treatment plan clearly and accurately.
5. The capacity to maintain composure and continue to function well during periods of high stress.
6. The perseverance, diligence and commitment to complete the Athletic Training Education Program as outlined and sequenced.
7. Flexibility and the ability to adjust to changing situations and uncertainty in clinical situations.
8. Affective skills and appropriate demeanor and rapport that relate to professional education and quality patient care.
Candidates for selection to the professional strand of the ATEP will be required to verify that they understand and meet these technical standards. The Office of Diversity and Equal Opportunity will evaluate a student who states that he/she cannot meet the program's technical standards as outlined in the Office of Diversity and Equal Opportunity policies. All athletic training students will participate in an annual screening and physical to be administered by the staff at Slippery Rock University' McLaughlin Health Center prior to the start of each academic year. This will be done to ensure that each student's physical and mental health will permit him or her to meet the established technical standards.

Effective in the fall of 2005, all athletic training students enrolled in the professional strand of the major will be required by the National Collegiate Athletic Association (NCAA) to carry health insurance.

Admission into the professional strand of the ATEP is competitive. The number of seats in the program is limited because of the faculty-to-student ratio recommended for accreditation. Formal application to the professional strand of
the ATEP must be completed by March of the student's freshman (first) year on campus. Formal application for admission consideration requires the following evidence:

1. Completion of ERS 107 (Introduction to Athletic Training) at Slippery Rock University with a minimum grade of "B."
2. A cumulative QPA of 2.750 or above in athletic training major courses and overall.
3. Completion of 50 hours of athletic training observation under a BOC certified athletic trainer (these 50 hours may be accumulated with the start of the fall semester of the student's first year on campus). The 50 hours must also be verified by the supervising ATC being observed. Licensed physical therapists that also hold the ATC credential may be observed as well.
4. Active membership in the Slippery Rock University Athletic Training Association.
5. Letter of application/intent, resume, and SRU transcript.
6. Letter of recommendation from the BOC certified athletic trainer who supervised the athletic training observation.
7. A 500 -word essay explaining "Why I want to become an athletic trainer."

Applicants will be ranked on the basis of QPA. Top ranked applicants will be scheduled for a personal interview. Final admission decisions will be made on the basis of academic, personal, and professional qualifications as evidenced by the student's application materials and interview responses. Students will be notified of admission decisions by the end of the freshman (first) year. Because the number of applicants may exceed the available seats, meeting the minimum criteria does not guarantee acceptance into the program. Students who have been selected for admission to the ATEP officially begin the professional strand of the major during the sophomore (second) year.

## Policy for Retention in the Athletic Training Program

Students who are accepted into the professional strand of the ATEP are required to satisfy didactic (classroom) and clinical education requirements throughout their remaining semesters in the program. Failure to maintain the minimum requirements for didactic and clinical education will result in probation. If the deficiencies are not corrected to the satisfaction of the faculty by the end of the probationary period, the student will be permanently suspended form the program. Upon recommendation of the faculty, students achieving compliance with the minimum standards following a probationary status will be permitted to complete the ATEP, which may require additional semesters.

## Board of Certification Credentialing Examination

Athletic training students who successfully complete all of the program requirements and receive the ATEP cocoordinator's endorsement are eligible to take the BOC credentialing examination administered by the BOC. Slippery Rock University graduates obtaining BOC certification are eligible for state licensure by the Pennsylvania State Boards of Medicine and Osteopathic Medicine.

## Transfer Students and Upperclassmen

The Athletic Training Education Program requires 3.5 full years (seven semesters and one summer) of coursework and a clinical experience in a structured and sequenced curriculum. Due to this rigorous program, transfer students and upperclassmen declaring a major in athletic training are placed at the freshman level. As required for all other ATEP students, transfer students and upperclassmen must complete the above application process and coursework.

## Requirements for the Major - Credits: 63

- ERS 107 - Introduction to Athletic Training Credits: 3
- ERS 217 - Care and Prevention of Athletic Injuries Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 277 - Integrative Approach to Athletic Training Credits: 3 (taken two times)
- ERS 317 - Therapeutic Modalities Theory Credits: 3
- ERS 327 - Therapeutic Modalities Procedures Credits: 3
- ERS 337 - Physical Examination of the Athlete Credits: 3
- ERS 347 - Theory of Therapeutic Techniques in Rehabilitation Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 357-Application of Therapeutic Techniques Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3 (taken 4 times)
- ERS 407-Advanced Studies in Current Strategies in Athletic Training Credits: 3
- ERS 427 - Mastery in Athletic Training Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3


## Requirements Under Liberal Studies - Credits: 21

- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- CDEV 248 - Human Development and Education Credits: 3
- HSAF 101 - Personal Health Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3


## Degree Completion in 3.5 Years Athletic Training (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 34

- Liberal Studies/Electives - Credits: 16
- CDEV 248 - Human Development and Education Credits: 3
- ERS 107 - Introduction to Athletic Training Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- HSAF 101 - Personal Health Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ERS 217 - Care and Prevention of Athletic Injuries Credits: 3
- ERS 277 - Integrative Approach to Athletic Training Credits: 3 (1 and 2)
- ERS 337 - Physical Examination of the Athlete Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(1)


## Summer - Total Hours: 6

- ERS 347 - Theory of Therapeutic Techniques in Rehabilitation Credits: 3
- ERS 357-Application of Therapeutic Techniques Credits: 3


## Junior Year - Total Hours: 35

- Liberal Studies/Electives - Credits: 8
- ERS 317-Therapeutic Modalities Theory Credits: 3
- ERS 327 - Therapeutic Modalities Procedures Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(2 and 3)
- ERS 407 - Advanced Studies in Current Strategies in Athletic Training Credits: 3
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3


## Senior Year - Total Hours: 15

- Liberal Studies/Electives - Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 387 - Practicum in Athletic Training Credits: 3
(4)
- ERS 427 - Mastery in Athletic Training Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3


## Biology (BA)

See the Department of Biology for more information.
Requirements for the Major - Credits: 32
Biology Courses - Credits: 32
Basic Requirements - Credits: 17

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 492 - Biology Seminar Credits: 1


## Additional requirements - Credits: 9

- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3 or BIOL 465
- BIOL 370 - Molecular Biology Credits: 3
- BIOL 401 - Ecology Credits: 3
- BIOL 410 - Animal Physiology Credits: 3 or BIOL 451
- BIOL 451 - Plant Physiology Credits: 3 or BIOL 410
- BIOL 465 - Plant Anatomy Credits: 3 or BIOL 340


## Electives - Credits: 6

Select two courses from the above or any approved 300 or $400-\mathrm{level}$ biology majors course. Additional electives may be selected from the Marine Science offerings.

## Chemistry Courses - Credits: 12

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1


## Mathematics Course - Credits: 4

- MATH 125 - Precalculus Credits: 4

Physics Course - Credits: 3

- PHYS 201 - Elements of Physics I Credits: 3


## Recommended Courses

- Any CPSC course
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1


## Degree Completion in Four Years Biology (BA)

Completion Hours: 120

Freshman Year - Total Hours: 29

- Liberal Studies/Electives - Credits: 1
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CPSC 110 - Computer Concepts Credits: 3 (recommended)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3

Sophomore Year - Total Hours: 32

- Liberal Studies/Electives - Credits: 3
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3 (recommended)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1 (recommended)
- COMM 200 - Public Speaking Credits: 3
- MATH 125 - Precalculus Credits: 4
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3

Junior Year - Total Hours: 30

- BIOL Electives - Credits: 9
- Liberal Studies/Electives - Credits: 18
- PHYS 201 - Elements of Physics I Credits: 3

Senior Year - Total Hours: 29

- BIOL Electives - Credits: 6
- Liberal Studies/Electives - Credits: 22
- BIOL 492 - Biology Seminar Credits: 1


## Biology (BS)

See the Department of Biology for more information.

## Requirements for the Major - Credits: 41

## Independent Study Option - Credits: 41

## Basic Requirements - Credits: 20

Biology Courses:

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 490 - Independent Study Credits: 1 to 3
- BIOL 492 - Biology Seminar Credits: 1

Additional Requirements - Credits: 15

- BIOL 310 - Plant Systematics Credits: 3
- BIOL 325 - Biometry Credits: 3
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 370 - Molecular Biology Credits: 3
- BIOL 401 - Ecology Credits: 3
- BIOL 410 - Animal Physiology Credits: 3
- BIOL 451 - Plant Physiology Credits: 3


## Electives - Credits: 6

Select two courses from the above or any approved 300 or 400-level biology major courses. Additional electives may be selected from the Marine Science offerings.

## Non-Independent Study Option - Credits: 41

As in the Independent Study track except substitute an additional 300- or 400-level majors course in biology in place of BIOL 490. Additional electives may be selected from the Marine Science offerings.

Chemistry Courses - Credits: 19

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1

Plus One Advanced Elective From:

- CHEM 335 - Biochemistry Credits: 3 or advanced chemistry course approved by Department of Biology chairperson.


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 7

- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Recommended Courses:

Any CPSC course

## Degree Completion in Four Years

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 1
- Computer Science Course (Recommended) - Credits: 3
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107- General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 125 - Precalculus Credits: 4

Sophomore - Total Hours: 29

- Liberal Studies/Electives - Credits: 6
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- COMM 200 - Public Speaking Credits: 3
- MATH 225 - Calculus I Credits: 4


## Junior Year - Total Hours: 31

- BIOL Electives - Credits: 12
- Liberal Studies/Electives - Credits: 12
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Senior Year - Total Hours: 30

- BIOL Electives - Credits: 9
- Liberal Studies/Electives - Credits: 14
- BIOL 490 - Independent Study Credits: 1 to 3
- BIOL 492 - Biology Seminar Credits: 1
- CHEM 335 - Biochemistry Credits: 3


## Career Services

103 Maltby Center

724-738-2028

## Associate Directors

Anthony Linnan
John Snyder

## Assistant Director

Penny Birch

## Secretaries

Deena Edwards
Lisa Theodorson

Career Services offers services to assist students in planning and securing a satisfying career. The services include appointments for selecting a major and career counseling, career interest inventory assessment, on-campus professional interviews, on-campus and off-campus job fairs, job vacancy listings, video-taped mock interviews, administration of several standardized tests including Praxis, LSAT, MAT, and the GRE Subject tests, and resource information about summer and professional employers, graduate schools, and job search preparation and strategies. Career Services provides a technology-based career resource center that is equipped with Dell computers, HP laser printers and supporting software. DISCOVER, a web based vocational guidance program is available to assist students to engage in career assessment and exploration. Students are able to respond to
internship and employment opportunities advertised on the internet to access employer information, and to develop quality resumes and cover letters in printed form or for electronic transmission.

Undergraduate students are encouraged to contact the office for information about summer and/or part-time off-campus employment opportunities. The office web page provides more details about services and staff www.sru.edu/career.

## Certificate in Accounting

The certificate in accounting program provides the opportunity for individuals with or without a baccalaureate degree to advance their employment potential by developing expertise and technical skills in the challenging and rewarding field of accounting. The accounting major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Certificate in Accounting

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 230-Accounting Information Systems Credits: 3 or
- ACCT 240 - Legal Environment or Business I Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 309- Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3


## Certificate in Case Management

## Requirements for Certificate in Case Management

Through careful selection of electives, nursing majors can obtain a certificate in Case Management while completing their BSN.

## Certificate in Elementary School Mathematics

Note: This program is not related to Pennsylvania State Certification.

## Requirements for the Certificate in Elementary School Mathematics

- MATH 118 - Elementary Geometry Credits: 3

And at Least Four Additional Courses From:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3


# Admission Restricted to Certified Teachers Who Have Completed the Equivalent Of: 

- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3


## Certificate in Gerontology

Coordinator<br>Adelle Williams<br>"My experience with the SRU gerontology program fostered my interest in aging. The education was the key that unlocked the door to my career in gerontology."

Michelle Zanicky Jamieson
December, 1992
Gerontology is an interdisciplinary specialization that focuses on aging and the aging process. This specialization is designed to enhance the understanding of aging and enrich interactions among generations. It is a valuable adjunct for those preparing to work directly with, or indirectly for, older persons. Job opportunities for students who have academic preparation in gerontology are available in community agencies servicing the older adult, long term care facilities and hospitals, senior citizen living facilities, and community recreation and senior centers. The program is open to students in any major. Students may decide to complete the requirements for a certificate in gerontology or a gerontology minor.

The Student Gerontological Society provides students with opportunities to participate in the annual campus-wide Health Fest in October, community outreach activities, and program marketing as well as attend national and regional conferences. Sigma Phi Omega, the national honorary society in gerontology, recognizes students' exemplary scholastic accomplishments in the field of aging. Undergraduate students with a QPA of 3.300 or above (on a 4.000 scale) are eligible to apply.

## Advisement

Students planning to complete the program in gerontology will declare a major within a department. Major responsibility for advisement will rest within this department. Students must assume responsibility for fulfilling all requirements for graduation.

## Requirements for the Certificate

With the assistance of an advisor from the Gerontology Program, students will select four 3-credit courses approved from the gerontology specialization and will culminate their studies with a 3-credit internship related to their area of interest.

## Courses Approved for Gerontology:

- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 476 - Physiological Aspects of Aging and Human Performance Credits: 3
- GERO 265 - Aging and the Older Person Credits: 3
- GERO 425 - Women and Aging Credits: 3
- GERO 450 - Gerontology Internship Credits: 3 to 12
- GERO 465 - Seminar in Gerontology Credits: 3
- GERO 490 - Independent Study Credits: 1 to 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 414 - Death and Dying Credits: 3
- NURS 498 - Selected Topics Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- SASW 342 - Sociology of Aging Credits: 3


## Certificate in Middle School Mathematics

This is not related to Pennsylvania State Certification.

## Requirements for the Certification

For certified teachers who have completed the equivalent of MATH 210 - Elementary Mathematics I, MATH 310 Elementary Mathematics II, and SEFE 311 - Teaching of Mathematics in Middle School.

- And at least three additional courses from: (at least one course must be from Group A)
- MATH 118 - Elementary Geometry Credits: 3 or Math 304
- MATH 225 - Calculus I Credits: 4
- MATH 304 - Geometric Structures Credits: 3 or Math 118


## Group A:

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 320 - Theory of Numbers Credits: 3


## Group B:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


# Admission Restricted to Certified Teachers Who Have Completed the Equivalent of: 

- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3
- SEFE 311 - Teaching of Mathematics in the Middle School Credits: 3


## Certificate in Personal Financial Planning

## Requirements for the Certificate - Credits: 18

The following 18 credit hours must be successfully completed (2.0 QPA in program and 2.0 QPA in all SRU coursework) to earn this certificate.

- ACCT 308 - Federal Individual Income Tax Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 329 - Principles of Insurance Credits: 3
- FIN 409 - Retirement and Estate Planning Credits: 3
- FIN 410 - Personal Financial Planning Seminar Credits: 3
- FIN 421 - Portfolio Theory Credits: 3


## Certificate in Statistical Applications

## Requirements for the Certificate

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3

Three Additional Courses:

At least one course must be from computer science.

- BIOL 325 - Biometry Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 318 - Intermediate Statistical Analysis Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3
- MATH 353 - Mathematical Statistics II Credits: 3
- PSYC 421 - Research Methods and Statistical Applications II Credits: 3


# Certificate of Academic Achievement in Religious Studies 

## Requirements for the Certificate - Credits: 18

A minimum of 18 credits, equally divided among courses in humanities and fine arts and in social and behavioral sciences, must be selected from the following:

- SASW 430
- ENGL 248 - Eastern Literature Credits: 3
- G\&ES 242 - Geography of Religion Credits: 3
- HIST 370 - History and the Bible Credits: 3
- PHIL 140 - World Religions Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- PHIL 341 - Philosophy of Religion Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3
- PHIL 375 - Existentialism and Phenomenology Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3


## Certification in Nanofabrication

## Requirements for the Certification


#### Abstract

Nanofabrication is a technology that grew out of making semiconductor chips. The need for faster computers has resulted in transistors getting smaller and smaller over time ( $\sim 100$ nanometers in length). These objects are so small that nanofabrication technology has become "machining at the atomic level" and it has spread from being used to make chips to being used to make a variety of technological innovations, including, artificial organs, tiny valves, and flat screen televisions. Nanofabrication and nanotechnology are engineering at the atomic length scale - a size range which until recently was only available to nature. Being able to engineer such small things opens the door to a multitude of new opportunities. These include making extremely fine diameter but incredibly strong fibers atom by atom, making extremely small probes that can look at individual strands of DNA for uses such as disease detection, and man-made capillary systems to bring nutrients to man-created replacement organs.

This Certification program is possible as part of an educational partnership between the SSHE System Universities and The Pennsylvania State University. Students wishing to earn a NMT Certificate must spend one semester at the Penn State Nanofabrication Facility in a hands-on nanofabrication "capstone experience." Students enrolled in the NMT program are required to take six courses ( 18 credit hours) at Penn State main campus. These courses can be taken in one semester (preferred) and or spread out to two or three semesters. These courses can be taken in any semester after sophomore year preferably summer or after graduation from Slippery Rock.

Requirements for entry into the Nanofabrication Program - Introductory or General Chemistry with Laboratory - College Algebra or higher math course - Introductory Statistics - Technical or Engineering Physics including electricity and circuits - Microcomputer basics


- College Writing I
- Department recommendation


## Chemistry (BA)

A chemistry major studies the chemical properties of substances in order to develop the ability to make discoveries and to solve the vast array of problems associated with existing technologies. Four programs of study leading to a bachelor of science degree and one leading to a bachelor of arts degree are available. The bachelor of arts program allows students to choose more elective courses in order to link chemistry with some other interest such as marketing/sales or patent law. The bachelor of science programs

The science and math courses requirements taken during the first two years in our programs are almost identical.

A pharmacy option in the biochemistry program enables students to take advantage of a $3+3$ affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy.

All of our students are strongly encouraged to do research under the direction of one of our faculty.

SRU graduates perform research and development at large corporations and small companies. Others are high school teachers and university professors.

## College-Wide Requirements:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- MATH 225 - Calculus I Credits: 4


## Requirements for the Major - Credits: 38-39

## Chemistry Courses - Credits: 31-32

plus 3-4 credits at the 300 level or above.

- CHEM 108-General Chemistry II Credits: 3
- CHEM 112-General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202-Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213 - General Physics III Credits: 3


## Degree Completion in Four Years

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 14
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CHEM Elective - Credits: 3
- Liberal Studies - Credits: 16
- Modern Languages - Credits: 3
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1


## Senior Year - Total Hours: 30

- Modern Language - Credits: 6
- Electives - Credits: 13
- Liberal Studies - Credits: 3
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Chemistry (BS)

A chemistry major studies the characteristics and interactions of matter in order to develop a rational perspective toward chemical information and technology. Two programs of study are available: bachelor of arts and bachelor of science. The bachelor of arts program allows more flexibility in choosing electives to complement the students interests and career goals. The bachelor of science program, which requires more credits in chemistry, is designed to prepare students for postgraduate chemistry programs and technical careers in the chemical industry. Both programs are designed to steadily develop the quantitative, deductive and inductive reasoning skills chemists are expected to have. Students in either program are strongly encouraged to do research under the direction of one of our faculty.

A 3+3 affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy (LECOM) has been established, thus facilitating smooth transition for a degree in pharmacy (see Pre-Professional Programs and/or School of Physical Therapy.

Graduates are qualified and prepared for the variety of professional positions available to chemists in industry or government. Alternatively, graduates can pursue further education in chemistry, engineering, medicine and a number of other science related programs. Students seeking state certification in secondary education must also complete requirements for a Master of Education degree.

Forensic Chemistry is a new B.S. degree program in chemistry. It includes the 32 -credit core that is common to all the chemistry baccalaureate degree programs and all but three of the courses in the biochemistry concentration. Two courses in criminal justice/sociology and forensic analysis provide the forensic science specialization.

The SRU student chemistry affiliate chapter of the American Chemical Society has won national awards on three occasions in recent years. Among student activities are field trips, local events such as "Chem. Games" and independent research projects with members of the faculty, often leading to presentations at American Chemistry Society meetings.

Chemistry majors graduating from Slippery Rock University have gone on to pursue a variety of careers. Examples include positions in industry, secondary education certification, attending graduate school, and attending professional schools, including dentistry, pharmacy, and medicine.

## College-Wide Requirements:

- CHEM 107-General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- MATH 225 - Calculus I Credits: 4

Requirements for the Major - Credits: 59

## Required Courses for the Chemistry (BS) - Biochemistry Track

## Chemistry Courses - Credits: 32

- CHEM 337
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 337 - Biochemistry II Credits: 3
- CHEM 338 - Biochemistry Laboratory II Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213 - General Physics III Credits: 3


## Biology Courses - Credits 17

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 335-Cell Biology Credits: 3
- BIOL 370 - Molecular Biology Credits: 3


## Required Courses for the Chemistry (BS) - Environmental Track

Chemistry Courses - Credits: 36

- CHEM 108-General Chemistry II Credits: 3
(* see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202 - Organic Chemistry II Credits: 3
(* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 340-Air Quality Assessment Credits: 4
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3 or
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 4

- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213 - General Physics III Credits: 3

Biology Courses - Credits: 8

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 357 - Environmental Microbiology Credits: 4

Environmental Geosciences Courses - Credits: 5

- EGEO 451-Geochemistry Credits: 4
- EGEO 453-Geotechniques: Geochemistry Credits: 1


## Required Courses for the Chemistry (BS) - Forensic Track

Chemistry Courses - Credits: 32

- CHEM 108-General Chemistry II Credits: 3 (* see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202 - Organic Chemistry II Credits: 3 (* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350-Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 415 - Forensic Anal Credits: 3
- CHEM 416 - Forensic Anal Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Mathematics Courses - Credits: 7

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 230 - Calculus II Credits: 4

Physics Courses - Credits: 3

- PHYS 213-General Physics III Credits: 3


## Biology Courses - Credits: 11

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 370 - Molecular Biology Credits: 3

Sociology Courses - Credits: 6

- SASW 205
- SASW 469


## Required Courses for the Chemistry (BS) - Non-Specialized Track

## Chemistry Courses Credits: 37

plus one credit from 496 and 6 credits at the 300 level or above.

- CHEM 108-General Chemistry II Credits: 3
(* see footnote)
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3 (* see footnote)
- CHEM 202 - Organic Chemistry II Credits: 3
(* see footnote)
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Computer Science Course - Credits: 3

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3 or CPSC 180


## Mathematics Courses - Credits: 8

- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4


## Physics Courses - Credits:7

- PHYS 212 - General Physics II Credits: 4
- PHYS 213 - General Physics III Credits: 3

Biology Courses - Credits: 4

- BIOL 104 - Principles of Biology Credits: 4

Degree Completion in Four Years Chemistry (BS) - Biochemistry Track

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 11
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 9
- BIOL 330 - Microbiology Credits: 3
- BIOL 335 - Cell Biology Credits: 3
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1

Senior Year - Total Hours: 30

- Liberal Studies - Credits: 19
- CHEM 337
- BIOL 370 - Molecular Biology Credits: 3
- CHEM 337 - Biochemistry II Credits: 3
- CHEM 338 - Biochemistry Laboratory II Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 9
- BIOL 357 - Environmental Microbiology Credits: 4
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 340-Air Quality Assessment Credits: 4
- CHEM 370 - Water Quality Assessment Credits: 4

Senior Year - Total Hours: 30

- Liberal Studies/Elective - Credits: 17
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351-Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1
- EGEO 451 - Geochemistry Credits: 4
- EGEO 453-Geotechniques: Geochemistry Credits: 1


## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 8
- SASW 205
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 225 - Calculus I Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 7
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- MATH 230 - Calculus II Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 15
- BIOL 370 - Molecular Biology Credits: 3
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1

Senior Year - Total Hours: 30

- SASW 469 - Credits: 3
- Liberal Studies - Credits: 11
- Electives - Credits: 8
- CHEM 415 - Forensic Anal Credits: 3
- CHEM 416 - Forensic Anal Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1


# Degree Completion in Four Years Chemistry (BS) - Non-Specialized Track 

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111-General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 11
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- MATH 231 - Calculus III Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 30

- CPSC - Credits: 3
- Liberal Studies - Credits: 15
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- PHYS 212 - General Physics II Credits: 4

Senior Year - Total Hours: 30

- CHEM Electives - Credits: 6
- Liberal Studies/Electives - Credits: 15
- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1
- CHEM 496 - Research Credits: 1 to 3


## Footnote

*Students must earn at least a "C" or better in these courses to register for Chemistry courses numbered 300 or above.

## Chiropractic

## Logan College of Chiropractic

Under the provisions of this program, students will matriculate at Slippery Rock University (SRU) for a minimum of 90 semester hours in course work leading toward the Bachelor of Science Degree in Biology. Students are admitted at Logan College of Chiropractic (LCC) only as first year doctorate of chiropractic students. Upon completion of the first year of studies at LCC a maximum of 34 LCC credits may be transferred toward completion of the Bachelor of Science Degree in Biology at SRU. An official transcript must be sent from LCC to the Dean of the College of Health, Environment, and Science at SRU, and the student must request application materials for graduation. While enrolled at SRU, students will complete all required course work as outlined below and described in the SRU Catalog.

Students should be aware of the following major points as they apply to this agreement:
i.The acceptance of transfer credits or testing toward completion of degree requirements shall be governed by current policies at SRU. However, no more than 20 credits of required courses, and NONE of the science credits required for admission to LCC may be earned via examination or transfer from another school.
ii.All students will complete a minimum of 100 hours of volunteer work with a licensed chiropractic professional prior to applying to LCC.
iii.Students who earn less than a 3.25 GPA , but at least a 2.75 GPA will be eligible for admission to LCC, and will receive appropriate consideration in the admission process for having completed the SRU Pre-Chiropractic Program, but will not receive the assurance of a seat reserved for students earning a 3.25 or higher GPA.
iv.Students will make application to LCC one year in advance of their desired entrance date and will complete all required application procedures thereafter in a timely manner, including submission of recommendation and a satisfactory interview.
v.Students enrolled in the Pre-Chiropractic Program from SRU who successfully complete all course work in the first two 15 week trimesters at LCC with C's or better will be granted the Bachelor of Science degree in Biology from SRU, provided they have met all other graduation requirements.
vi.Students shall pay the appropriate tuition and fees to each institution for all course work taken at that institution. During their first year of study at LCC, students shall not be registered for courses at SRU, but shall pay any fees required to maintain their registration toward the baccalaureate degree. Upon completion of the first year of study at LCC, students shall be responsible for any fees regularly charged by SRU for transfer of credits and awarding the baccalaureate degree.

## Required courses at SRU:

## Biology Courses - Credits: 25

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 492 - Biology Seminar Credits: 1


## Chemistry Courses - Credits: 19

- CHEM 107-General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4

Physics Courses - Credits: 7

- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3


## Communication (BA)

## Requirements for the Major - Credits:39

Students are required to complete a program of 39 credit hours, including COMM 110, COMM 310, COMM 410, and COMM 413. The balance of the program is defined for each student by selecting courses from several levels in consultation with the advisor. All students in the Communication major must maintain an overall QPA of 2.5 to enroll in COMM 310 and COMM 410 or to graduate with a Communication degree.

The Bachelor of Arts degree requires proficiency at the 103 level of a modern language or the equivalent.
Students may transfer credits from other institutions toward the major but must earn at least 15 credits in communication from Slippery Rock University. At least 9 of these credits must be from courses numbered 300 or above, including at least 3 credits from courses numbered 400 or above.

- COMM 110 - Communication Concepts Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 410 - Communication Law Credits: 3
- COMM 413 - Communication Theory Credits: 3

A Minimum of a 2.0 is Required in Each of the Following Courses:

- COMM 110 - Communication Concepts Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 410 - Communication Law Credits: 3


## Degree Completion in Four Years Communication (BA)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- COMM Elective - Credits: 3
- Language 101, 102 - Credits: 6
- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 11
- COMM 110 - Communication Concepts Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Language 103 - Credits: 3
- Liberal Studies Courses - Credits: 12
- COMM Electives - Credits: 12
- COMM 200 - Public Speaking Credits: 3

Junior Year - Total Hours: 30

- COMM Electives - Credits: 12
- Free Electives/Minor - Credits: 6
- Liberal Studies Courses - Credits: 9
- COMM 310-Communication Research Methods Credits: 3

Senior Year - Total Hours: 30

- COMM Electives - Credits: 6
- Free Electives/Minor - Credits: 21
- COMM 410 - Communication Law Credits: 3

Internship Option - Credits: 3-12

## Communication (BS)

Requirements for the Major - Credits: 56-59

All students in the Communication major must maintain an overall QPA of 2.5 to enroll in COMM 310 and COMM 410 or to graduate with a Communication degree.

A minimum of a 2.0 is required in each of the following courses: COMM 110,310 and 410.

## Required Courses - Credits: 56

Students are required to complete a course of study of 56 credit hours. A common core of 17 credits is required for all tracks, including:

- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 393 - Junior Seminar Credits: 1
- COMM 410 - Communication Law Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## The Balance of the Program is Defined for Each Track as Follows

Internship Option - Credits: 3-12

## Emerging Technology and Multimedia

Technology Skills - Credits: 15
Design Skills - Credits: 3
Management/Interpersonal Skills - Credits: 6
Applied Communication - Credits: 3
Communication Electives - Credits: 6
Including: Business or Presentation Skills, Publication/Visual Skills, Multimedia, and Video Production. Students in this track are required to take CPSC 130, and CPSC 140, as part of their Liberal Studies program.

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3


## Degree Completion in Four Years Communication (BS - Emerging Technologies)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 9
- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies Courses - Credits: 12
- COMM 200 - Public Speaking Credits: 3
- COMM 232 - Publication Production Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3

Junior Year - Total Hours: 29

- COMM Elective - Credits: 3
- Liberal Studies Courses - Credits: 16
- COMM 310 - Communication Research Methods Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- COMM 362 - Mass Media and Society Credits: 3
- COMM 393 - Junior Seminar Credits: 1

Senior Year - Total Hours: 30

- COMM Electives - Credits: 3
- Liberal Studies Courses - Credits: 3-14
- COMM 353 - Media Project Credits: 3
- COMM 410- Communication Law Credits: 3
- COMM 449-Communication Projects Credits: 3 or
- COMM 450 - Internship Credits: 3 to 12
- COMM 459 - Issues in Communication Technologies Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Public Relations

## Core Communication Requirements - Credits: 17

Public Relations Emphasis - Credits: 27
Message Production and Preparation - Credits: 6
Communication Project or Internship - Credits: 3 (COMM 449 or COMM 450)

Business or Marketing - Credits: 3

- COMM 449 - Communication Projects Credits: 3
or
- COMM 450 - Internship Credits: 3 to 12


## Degree Completion in Four Years Communication (BS - Public Relations)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 15
- COMM 110 - Communication Concepts Credits: 3
- COMM 112 - Message and Content Design Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 31

- Liberal Studies Courses - Credits: 13
- COMM 200 - Public Speaking Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 231 - Introduction to Public Relations Credits: 3
- COMM 232 - Publication Production Credits: 3
- COMM 242 - News Writing Credits: 3
- COMM 362 - Mass Media and Society Credits: 3

Junior Year - Total Hours: 31

- Business/Marketing Elective - Credits: 3
- Liberal Studies Courses - Credits: 12
- Internship - Credits: 3
- COMM 310 - Communication Research Methods Credits: 3
- COMM 315 - Organizational Communication Credits: 3
- COMM 332-Case Studies in Public Relations and Integrated Communications Credits: 3
- COMM 333 - Public Relations Writing Credits: 3
- COMM 393 - Junior Seminar Credits: 1

Senior Year - Total Hours: 27

- Message Prod. \& Prep. Electives - Credits: 6
- Elective - Credits: 3
- Liberal Studies Courses - Credits: 8
- COMM 312 - Argumentation Credits: 3 or COMM 415
- COMM 410-Communication Law Credits: 3
- COMM 415 - Persuasion Credits: 3 or COMM 312
- COMM 431 - Public Relations and Integrated Communications Campaigns Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Journalism

Core Communication Requirements. - Credits: 17
Journalism Emphasis - Credits: 18
Including 3 credits in Applied Communication (COMM 449: Communication Project, or COMM 450: Communication Internship.)

## Communication Electives - Credits: 18

Distributed in the areas of Print Journalism, Broadcast Journalism, and Media Concepts. Students must take at least 2 courses from Media Concepts block, and a least one course from remaining two blocks.

- COMM 449 - Communication Projects Credits: 3
or
- COMM 450 - Internship Credits: 3 to 12


## Degree Completion in Four Years Communication (BS - Journalism)

## Completion Hours: 120

## Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- Liberal Studies Courses - Credits: 18
- COMM 110 - Communication Concepts Credits: 3
- COMM 115 - Visual Literacy Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- COMM Electives - Credits: 6
- Liberal Studies Courses - Credits: 12
- COMM 200 - Public Speaking Credits: 3
- COMM 242 - News Writing Credits: 3
- COMM 348-Advanced Reporting Credits: 3
- COMM 362 - Mass Media and Society Credits: 3

Junior Year - Total Hours: 31

- COMM Elective - Credits: 3
- Liberal Studies Courses - Credits: 15
- COMM 310-Communication Research Methods Credits: 3
- COMM 343 - Feature Journalism Credits: 3
- COMM 344 - The Editorial Function: Copy Credits: 3
- COMM 346 - Investigative Reporting Credits: 3
- COMM 393 - Junior Seminar Credits: 1


## Senior Year - Total Hours: 28

- COMM Electives - Credits: 12
- Liberal Studies Courses - Credits: 12
- COMM 410 - Communication Law Credits: 3
- COMM 493 - Senior Seminar Credits: 1


## Community Health (BS)


#### Abstract

"After my graduation from Slippery Rock University, I had no problem gaining employment. Other health professionals seemed to be very impressed with the educational background I received as a community health major. Because I am working as a health data analyst, I found my data management, biostatistics, and epidemiology courses to be most helpful. My employers were also impressed that, while at SRU, I participated in an undergraduate research project. This provided me with the opportunity to further explore and practice data analysis."


Amy Zychowski ${ }^{9} 9$
Community Health is a discipline in which professionals deliver health information and programs within the community setting. Graduates of this program have a broad based background in the field of health that prepares them for entry level positions in health education, health promotion, health data management or for further graduate study in a health-related field.

Upon completion of this program our students are eligible to sit for the Certified Health Education Specialist examination, which is a national credentialing examination for people who wish to practice health education in a community (non-public school) setting. Today, the Certified Health Education Specialist credential is often preferred or even required for many health education positions. Graduates who complete our Community Health program successfully pass the Certified Health Education Specialist examination at a rate well above the national average. Recent graduates have entered positions in state and local health departments, in community based wellness programs, for voluntary health organizations such as the American Heart Association or American Cancer Society, and for federal government health programs, and health insurance companies. Graduates also enter graduate programs in physical or occupational therapy.

Students are encouraged to take additional coursework or minors in complementary areas of study such as gerontology, foreign language, psychology or business. The program culminates in a 12 -credit internship, which provides hands-on experiences and further insights into career opportunities in community health. Students may select their own internship site or may choose from a database of previously used sites. It is through this internship experience that students actually identify the branch of community health in which they would like to practice. Students are required to select a major project for their internship experience that demonstrates mastery of entry-level professional skills. Frequently interns remain at the sites as employees following their internships.

Community health faculty members have on-going research projects in which advanced level students can become involved. Students help professors analyze data and prepare professional conference presentations, which the student actually presents under the mentorship of the faculty member. Other student activities include the Pennsylvania Public Health Association Collegiate Chapter and the peer health education program run by the SRU student health service.

## Admission Criteria

Declaration of the community health major does not guarantee admission into the community health program.

To be officially admitted into the community health program, a student must attain a minimum cumulative QPA of 2.000 and a minimum QPA of 2.500 in the program courses by the end of the second semester of the sophomore year.

## Requirements for the Major - Credits: 60

## Professional Requirements

- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- CHEM 104 - Introduction Chemistry I Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 301 - Introduction to Health Education Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- HSAF 450 - Internship Credits: 12
- MATH 152 - Elementary Statistics I Credits: 3


## Internship Required:

Cumulative QPA of 2.000 and program QPA of 2.500 required for internship assignments, which are during the summer.

## Retention Criteria

Students must maintain both a 2.000 cumulative and 2.500 program QPA to be retained in the program. Students failing to meet a QPA of 2.000 cumulative and a 2.500 in the program (major) will be given one semester to meet these requirements. Students can either retake courses or take additional courses to improve their QPA. If the student is not successful in meeting the QPA requirements, the student will be removed from the program. At that point the student must select another major.

## Degree Completion in Four Years Community Health (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies Credits: 18
- CHEM 104 - Introduction Chemistry I Credits: 3
- CPSC 110 - Computer Concepts Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 301 - Introduction to Health Education Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


## Junior Year - Total Hours: 30

- Electives Credits: 9
- BIOL 210 - Medical Microbiology Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3

Senior Year - Total Hours: 30

- Electives Credits: 12
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- HSAF 450 - Internship Credits: 12


## Community Programs for Americans with Disabilities (BS)

## (no teacher certification)

Students may elect to major in special education without working for a teaching certificate. The program, Community Programs for Americans with Disabilities (CPAD) prepares professionals for a variety of community-based roles providing services for children and adults with disabilities. These roles include: case managers for intermediate care facilities, house managers for community residences, supervisors for sheltered workshops, and directors for community living arrangement programs. Students conclude the CPAD program with a 12 -credit internship within a local community-based facility.

## Requirements for the Major - Credits: 33

Students may elect to major in special education without working for a teaching certificate. The program, Community Programs for Americans with Disabilities (CPAD) prepares professionals for a variety of community-based roles providing services for children and adults with disabilities. These roles include: case managers for intermediate care facilities, house managers for community residences, supervisors for sheltered workshops, and directors for community living arrangement programs. Students conclude the CPAD program with a 12 -credit internship within a local community-based facility.

## Degree Completion in Four Years

## Completion Hours: 120

## Freshman Year - Total Hours: 31

- Liberal Studies - Credits: 14
- ENGL 102 - Credits: 3
- ENGL 101 - College Writing I Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1 /Choice
- SPED 100 - Introduction to Special Education Credits: 3
- SPED 204 - Educational Aspects of the Mental Retardation Credits: 3
- SPED 212 - Life Management for Persons with Disabilities Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 15
- CDEV 342 - Educational Psychology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- SPED 105 - Americans with Disabilities Credits: 3
- SPED 202 - Educational Aspects of Physical Disabilities Credits: 3
- SPED 203 - Educational Aspects of ED/LD Credits: 3

Junior Year - Total Hours: 32

- Leisure/Rec Block - Credits: 9
- Soc-Cultural Block - Credits: 8
- Liberal Studies - Credits: 12
- SPED 250 - Seminar in CPAD Credits: 3

Senior Year - Total Hours: 27

- Management Block - Credits: 6
- Personal Develop Block - Credits: 9
- Internship - Credits: 12


## Computer Science (BS)

The major in computer science emphasizes modern approaches to software and hardware development and requires mastery of abstract concepts. Theoretical subjects are included for essential conceptual foundations along with practical applications of theory. Computer science majors are offered an entrance to all facets of the dynamic computer field. This degree offers solid preparation for graduate study in computer science or applied areas involving computing.

Graduation requirements for all students pursuing the bachelor of science degree with the major of computer science include a minimum 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Electives, and a minimum 2.000 quality point average in all course-work completed at Slippery Rock University.

For transfer students to earn the bachelor of science degree with a major in computer science, the required course work for the major must include a minimum of six computer science courses ( 18 credits) at the 200 level or above, at least two of which must be at the 400 level, and completed at Slippery Rock University.

## Requirements for the Major - Credits: 70

## Required Courses - Credits: 46

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3
- CPSC 378 - Theory of Computation Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- ECON 219 - Business Statistics Credits: 3
or MGMT 219 or MATH 152 Elementary Statistics
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
or MATH 235 Modern Concepts of Math or MATH 240 Linear Algebra and Differential Equations


## Required Electives - Credits: 12

(Maximum of 3 credits from CPSC 236 and CPSC 217; a maximum of 3 credits in CPSC 450 permitted.)

- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 370 - Assembly Language and Machine Organization Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## Required Science Courses - Credits: 13

```
Select From - Credits: 7-8
Chem 107, Chem }108\mathrm{ and Chem 111;
or
Phys }211\mathrm{ and Phys 212; or Phys }201\mathrm{ and Phys 202;
or
EGEO 101, EGEO 111, EGEO }102\mathrm{ and EGEO 112;
or
EGEO 101, EGEO }111\mathrm{ and EGEO 231;
or
EGEO 101, EGEO }111\mathrm{ and EGEO 241;
or
EGEO 121 and EGEO 221;
or
BIO 104 and one of BIO 201 or BIO 212 or BIO 250;
or
BIO 101 and one of BIO 201 or BIO 212 or BIO 250.
- BIOL 101 - General Biology Credits: 3
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 107-General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 221 - Weather and Climate Forecasting Credits: 3
- EGEO 231 - Aerial Photography Interpretation Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5
- PHYS 211 - General Physics I Credits: 4
- PHYS 212 - General Physics II Credits: 4
```

Additional Science Courses

Select 5-6 Credit Hours

## Degree Completion in Four Years Computer Science (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- FYRST Seminar - Credits: 1
- Liberal Studies - Credits:9
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3 or ECON 219 or MGMT 219 Business Statistics
- MATH 225 - Calculus I Credits: 4


## Sophomore Year - Total Hours: 29

- CPSC Elective - Credits: 3
- 2 Course Lab Science - Credits: 7
- Liberal Studies - Credits: 6
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 230 - Calculus II Credits: 4

Junior Year - Total Hours: 30

- CPSC Electives - Credits: 6
- Liberal Studies - Credits: 9
- Liberal Studies at 300+ - Credits: 3
- Science Elective - Credits: 3
- CPSC 378- Theory of Computation Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3

Senior Year - Total Hours: 31-32

- CPSC Elective (may be lower division) - Credits: 3
- Math Electives ( 231 or 235 or 240 ) - Credits: 3 or 4
- Science Elective - Credits: 3
- Liberal Studies at 300+- Credits: 3
- Free Electives - Credits: 10
- Free Electives at 300+ - Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 488 - Software Engineering Credits: 3


## Cytotechnology (BS)

Cytotechnologists are highly skilled laboratory professionals who enjoy excellent opportunities in the present job market, which include hospital laboratories, private clinics and cancer research laboratories. In our 3+1 program the student spends three years in coursework at Slippery Rock University and one calendar year in clinical and didactic study at an American Medical Association accredited hospital school of cytotechnology.

During the three years on campus the student earns a minimum of 91 credits. Upon the successful completion of the clinical 12 months, the university accepts 29 semester credits in transfer and awards the bachelor of science degree. Because of the nature of the cytotechnology curriculum, transfer students are strongly urged to earn 64 credits at Slippery Rock University.

Slippery Rock University is formally affiliated with the Fletcher Allen Health Care, Burlington, VT, and the School of Cytotechnology, Albany Medical College, Albany, NY.

Note: A 2.000 average must be maintained in BIOL 104, 210, 213, 214, 215, 216, 217, and 250 before cytotechnology students can move on to the next required course. See also Department of Biology guidelines for further restrictions.

## Requirements for the Major - Credits: 50

Biology Courses - Credits: 26

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 213 - Medical Immunology Credits: 1
- BIOL 214 - Medical Parasitology Credits: 1
- BIOL 215 - Medical Mycology Credits: 1
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- BIOL 250 - Genetics Credits: 4
- BIOL 335-Cell Biology Credits: 3
- BIOL 470 - Histology Credits: 3

Chemistry Courses - Credits: 16

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1


## Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4

Physics Course - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Dance (BA)

## Requirements for the Major

Core Courses - Credits: 40

- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 224 - Improvisation Credits: 2
- DANC 300 - Dance Composition Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 323 - Teaching of Dance Credits: 3

DANC 350 - Field Experience

- DANC 324 - Music for Dance Credits: 3
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 350 - Field Experience Credits: 1

DANC 323 - Teaching of Dance

- DANC 419 - Dance History II: Twentieth Century Credits: 3
- DANC 420 - Modern Dance IV Credits: 2
- DANC 425 - Senior Synthesis Credits: 3
- DANC 498 - Selected Topics: World Dance Credits: 2


## Technique Courses - Credits: 22

All Dance majors are required to demonstrate Level IV proficiency in modern dance and Level II proficiency in ballet and jazz dance, choosing from the following:

- DANC 220 - Modern Dance II Credits: 2
- DANC 221 - Ballet II Credits: 2
- DANC 222 - Jazz Dance II Credits: 2
- DANC 320 - Modern Dance III Credits: 2
- DANC 321 - Ballet III Credits: 2
- DANC 322 - Jazz III Credits: 2
- DANC 420 - Modern Dance IV Credits: 2
- DANC 421 - Ballet IV Credits: 2
- DANC 422 - Jazz IV Credits: 2
- DANC 426 - Modern Dance V Credits: 2
- DANC 427 - Ballet V Credits: 2
- DANC 428 - Modern Dance VI Credits: 2
- DANC 429 - Ballet VI Credits: 2
- DANC 498 - Selected Topics: World Dance Credits: 2


## Electives - Credits: 5

- DANC 112 - Tap Dance I Credits: 1
- DANC 271 - Dance Technology Credits: 3
- DANC 399 - Repertory Credits: 1
- DANC 400 - Dance Composition III Credits: 3
- DANC 450 - Dance Internship Credits: 3
- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3


## Degree Completion in Four Years Dance (BA)

Completion Hours: 120
It is highly recommended that students take as many dance technique classes as possible each semester.

## Freshman Year - Total Hours: 32

- Modern Dance (2) - Credits: 4
- Ballet (2) - Credits: 4
- Jazz Dance - Credits: 2
- Liberal Studies - Credits: 9
- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 224 - Improvisation Credits: 2
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1

Sophomore Year - Total Hours: 31

- Modern Dance (2) - Credits: 4
- Ballet - Credits: 2
- Language 101 - Credits: 3
- Language 102 - Credits: 3
- Liberal Studies - Credits: 6
- COMM 200 - Public Speaking Credits: 3
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 498 - Selected Topics: World Dance Credits: 2


## Junior Year - Total Hours: 31

- Modern Dance (2) - Credits: 4
- Language 103 - Credits: 3
- Liberal Studies - Credits: 9
- DANC 300 - Dance Composition Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 324 - Music for Dance Credits: 3
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 419 - Dance History II: Twentieth Century Credits: 3


## Senior Year - Total Hours: 26

- Liberal Studies - Credits: 18
- DANC Elective - Credits: 1
- DANC 323 - Teaching of Dance Credits: 3
- DANC 350 - Field Experience Credits: 1
- DANC 425 - Senior Synthesis Credits: 3


## Economics (BS)

The program of economics offers a bachelor of science degree and a bachelor of science in business administration with a major in economics. Economics studies how markets allocate resources to promote our material well-being. It helps students develop a framework for understanding how events affect different markets for goods and services and how the aggregate functioning of the markets determine output, employment and prices. Students are also able to evaluate government policies designed to stabilize the economy, redistribute income, regulate industries and foster international trade.

Economics majors are encouraged to join both Omicron Delta Epsilon, an international honor society in economics, and the Economics, Finance and International Business Club. Both sponsor a variety of professional and social activities which allow students to enhance their out-of-classroom experience, develop a sense of professional common bond and group support among themselves and create a network with off-campus professionals.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, and manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Economics offers a broader view of the economy than other business related majors. The emphasis is on developing logical thinking, which aids in decision making and problem solving skills. Graduates are well prepared for careers in the public and private sector and receive an excellent background for furthering their education at graduate or professional schools. The economics major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 36

## Basic Major Requirements - Credits: 30

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219


## Plus 15 Credits of Economic Elective Courses

At the 300 level or higher and /or including:

- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 453-Collective Bargaining Credits: 3

Math Requirement - Credits: 3

- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 210 and MATH 214)


## Skill Requirements - Credits: 3

- CPSC 210 - Productivity Software Credits: 3


## Degree Completion in Four Years Economics (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies Elective - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies Elective - Credits: 18
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- MGMT 251-Organizational Behavior Credits: 3


## Junior Year - Total Hours: 30

- Liberal Studies Elective - Credits: 18
- Economics Elective - Credits: 6
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## Senior Year - Total Hours: 30

- Economics Elective - Credits: 9
- Liberal Studies Electives - Credits: 21
- ACCT 313 - Intermediate Accounting I Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Economics (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in economics. The program of economics offers a bachelor of science degree and a bachelor of science in business administration with a major in economics. Economics studies how markets allocate resources to promote our material well-being. It helps students develop a framework for understanding how events affect different markets for goods and services and how the aggregate functioning of the markets determine output, employment and prices. Students are also able to evaluate government policies designed to stabilize the economy, redistribute income, regulate industries and foster international trade.

Economics majors are encouraged to join both Omicron Delta Epsilon, an international honor society in economics, and the Economics, Finance and International Business Club. Both sponsor a variety of professional and social activities which allow students to enhance their out-of-classroom experience, develop a sense of professional common bond and group support among themselves and create a network with off-campus professionals.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, and manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Economics offers a broader view of the economy than other business related majors. The emphasis is on developing logical thinking, which aids in decision making and problem solving skills. Graduates are well prepared for careers in the public and private sector and receive an excellent background for furthering their education at graduate or professional schools. The economics major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 57

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3
or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 15

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## And 3 Elective Courses

Elective courses are selected from any 300-400 level economic courses excluding internship.

## Education - Economics Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in social studies with an emphasis in economics are available from the Department of Economics or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building 105.

## Education - English Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in English are available in the Department of English or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

# Education - Environmental Education Emphasis (BSEd) 

See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## Education - French Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in French are available from the Department of Modern Languages and Cultures or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## Education - History Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teaching certification in social studies with an emphasis in history are available in the Department of History or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building Room 105.

## Education - Sociology/Anthropology Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in social studies with an emphasis in sociology/anthropology are available in the Department of Sociology, Anthropology and Social Work or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building. Pending legislation and university programmatic changes now being considered may substantially change the social studies certification requirements. Up-to-date information can be obtained in McKay Education Building 105.

## Education - Spanish Emphasis (BSEd)

## Requirements

The specific course of study and the requirements leading to teacher certification in Spanish are available in the Department of Modern Languages and Cultures or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building.

## Elementary Education/Early Childhood Education (BSEd)

The specific course of study and the requirements leading to teacher certification administered by the Department of Elementary Education/Early Childhood Education are available in the departmental office, from the student's advisor,
and from the Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

The guidelines on admission, professional conduct, and student teaching for this department are subject to change. Current requirements for the College of Education as a whole may be found in the Teacher Education Policy Manual.

## Track: Elementary School Teaching

## Degree Completion in Four Years Elementary Education Certification (BSEd)

Completion Hours: 120
Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 15
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 15
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- HSAF 205 - First Aid and Safety Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3

Required

- SEFE 200 - Introduction to Education Credits: 3

Junior Year - Total Hours: 30-31

- LS, Challenges of the Modern Ages - Credits: 3
- Free Elective - Credits: 1-2
- CDEV 342 - Educational Psychology Credits: 3
- ELEC 281 - Cultural Awareness in the Elementary Classroom Credits: 3
- ELEC 288 - Children's Literature Credits: 3
- ELEC 301 - Math/Science Teaching Lab Credits: 1
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- ELEC 385 - Creativity in Elementary School Credits: 1 to 3
- PE 243 - Movement Education Credits: 2 or DANC 223
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3


## Senior Year - Total Hours: 27

- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 352 - The Teaching of Language Arts Credits: 3
- ELEC 372 - The Teaching of Elementary Social Studies Credits: 3
- ELEC 455 - Student Teaching: Elementary Education Credits: 12, 6, 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Track: Early Development and Learning (No Teacher Certification)

Students may elect to major in elementary education without working for a teaching certificate. The track, Early Learning and Development, prepares graduates for a variety of community-based roles working with young children. Students conclude the program with a 12 -credit internship within a local community-based facility.

## Degree Completion in Four Years Early Developement and Learning

Completion Hours: 120

## Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 19
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 9
- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ELEC 281 - Cultural Awareness in the Elementary Classroom Credits: 3
- ELEC 288 - Children's Literature Credits: 3
- SEFE 200 - Introduction to Education Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 9
- ELEC 317 - Child and Family Development in Early Childhood Credits: 3
- ELEC 327 - Social/Cultural Studies in Early Childhood Education Credits: 3
- ELEC 337 - Emerging Literacy Credits: 3
- ELEC 347 - Modern Primary Programs Credits: 3
- ELEC 385 - Creativity in Elementary School Credits: 1 to 3
- ELEC 407 - Math and Science in Early Childhood Learning Credits: 3
- HSAF 205 - First Aid and Safety Credits: 3

Senior Year - Total Hours: 28

- Free Elective - Credits: 2-3
- ELEC 427 - Early Intervention Credits: 3
- ELEC 437 - Assessment in Early Childhood Credits: 3
- ELEC 445 - Administration of Child Care Programs Credits: 3
- ELEC 447 - Early Childhood Field Experience Credits: 3
- ELEC 450 - Internship: Early Childhood Credits: 12
- PE 243 - Movement Education Credits: 2 or DANC 223


## English Literature (BA)

Students will study the interactions between cultures and literary texts. Writing, linguistics, and oral interpretation of literature are also required. The writing sequence includes an internship. Students take a minimum of 39 credits in English, exclusive of freshman composition courses.

## Requirements for the Major - Credits: 39

## Required Courses

- ENGL 220 - Writing About Literature Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 402 - World Literature Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 480 - Literature Seminar Credits: 3


## Three Credits Chosen From:

- ENGL 312 - Shakespeare Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3


## Three Credits Chosen From:

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3


## Three Credits Chosen From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3

Electives - Credits: 6

Proficiency of Modern Languages Through the 103 Level

Degree Completion in Four Years English (BA in Literature)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- Language 101, 102 Credits: 6
- Liberal Studies Credits: 18
- PESM Activity Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 31

- Language 103 Credits: 3
- Liberal Studies Credits: 15
- COMM 200 - Public Speaking Credits: 3
- ENGL 220 - Writing About Literature Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1

Junior Year - Total Hours: 28

- Liberal Studies Credits: 10
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3


## Choose One From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3

Senior Year - Total Hours: 30

- Liberal Studies Credits: 3
- Electives Credits: 15
- ENGL 312 - Shakespeare Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3
- ENGL 402 - World Literature Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 480 - Literature Seminar Credits: 3


## Requirements for Internships

Internships with local and national organizations and industries enable students to acquire relevant experience in their areas of academic preparation. English majors with a QPA of 2.500 overall and 3.000 in their major courses are eligible.

## English Writing (BS)

## Requirements for the Major - Credits: 39 minimum

A minimum of 39 credits is required, exclusive of the freshman composition courses; ENGL 099, 101 and 103. Internships sequence courses outside of the Department of English, as described below, are in addition to the 39 credits in English. College Writing I is a prerequisite for all writing courses.

## Professional Concentration - Credits: 42

(At least 24 credits from the following): 18 credits from:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3 or ENGL 340
- ENGL 306-Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
or
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3 or ENGL 240
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Required Literature Courses:

- ENGL 403 - Literary Criticism Credits: 3


## 6 Credits From:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 312 - Shakespeare Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 318 - British Literature II Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 320 - American Literature II Credits: 3
- ENGL 389 - Stratford Shakespeare Tour Credits: 3
- ENGL 402 - World Literature Credits: 3


## Language Requirement Credits: 9

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3


## Degree Completion in Four Years English: Professional Writing (BS)

Completion Hours: 120
Freshman Year - Total Hours: 28

- PESM Activity Credits: 1
- Liberal Studies Credits: 21
- Liberal Studies Credits: 13
- COMM 200 - Public Speaking Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Concentration Credits: 1
- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205 - Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
or
- ENGL 340 - Creative Writing: Poetry Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1

Junior Year - Total Hours: 32

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 3
- Concentration $2 \& 3$ Credits: 6
- Elective Credits: 8
- ENGL 306-Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
or
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3

Senior Year - Total Hours: 30

- Concentration 4 \& 5 Credits: 6
- Electives Credits: 9
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Creative Concentration - Credits: 39

(At least 21 credits from the following): 9 credits from:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3


## Degree Completion in Four Years English: Creative Writing (BS)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- PESM Activity Credits: 1
- Concentration Course Credits: 3
- Liberal Studies Credits: 21
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 29

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 13
- PESM Activity Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205-Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
or
- ENGL 340 - Creative Writing: Poetry Credits: 3


## Junior Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Liberal Studies Credits: 6
- Concentration 2, 3 Credits: 6
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 310 - Auto/Biographical Writing Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3

Senior Year - Total Hours: 30

- ENGL Lit Elective Credits: 3
- Concentration 4, 5 Credits: 6
- ENGL 310-Auto/Biographical Writing Credits: 3
- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 403 - Literary Criticism Credits: 3
- ENGL 409 - Advanced Research Writing Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## Requirements for Internships

Internships with local and national organizations and industries enable students to acquire relevant experience in their areas of academic preparation. English majors with a QPA of 2.500 overall and 3.000 in their major courses are eligible.

## Environmental Education (BSEd) (with or without Certification Option)

Coordinator<br>Daniel Dziubek

The degree program in environmental education is administered by the Department of Parks and Recreation/Environmental Education. It provides K-12 teacher certification in environmental education and is the only
four-year degree program in environmental education within the Commonwealth of Pennsylvania. A non-certification option is also available. Students receive practicum and other experiences from a wide variety of public and private education programs, including the McKeever Environmental Learning Center, operated by Slippery Rock University, and the Jennings Environmental Education Center, operated by the Pennsylvania Bureau of State Parks. Special opportunities are provided through many programs such as Project Learning Tree, Project WILD, and Keystone Aquatic Resource Education, and a number of other nationally recognized environmental education curricula.

Graduates are currently serving as teachers, environmental education coordinators, environmental center directors, park naturalists and interpretive specialists, conservation district executives, and administrators in a variety of educational and resource-oriented agencies.

Note: Admission to and retention in this teacher education program are prerequisites for teacher education coursework; minimum QPA and major QPA prerequisites also apply. See Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

Department advanced standing status is required for non-teaching certification students prior to enrollment in PREE 450. Details are available in the Department of Parks and Recreation/Environmental Education or from the student's advisor.

For other degree programs administered by the Department of Parks and Recreation/Environmental Education see the Parks and Recreation section.

## Requirements for the Major - Credits: 60

## Required Professional Education Courses - Credits: 39

- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3
- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- PREE 455 - Student Teaching - Environmental Education Credits: 12, 6, 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Required Environmental Education Courses - Credits: 21

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- PREE 160 - Intoduction to Environmental Education Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 361 - Environmental Teaching Credits: 3
- PREE 464 - Environmental Decision Making Credits: 3


## Degree Completion in Four Years Environmental Education (BSEd)

## Completion Hours: 120

(BSEd with or without Certification Option)
Freshman Year - Total Hours: 27

- Liberal Studies - Credits: 18
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- PREE 160 - Intoduction to Environmental Education Credits: 3
- SEFE 200 - Introduction to Education Credits: 3

Sophomore Year- Total Hours: 30

- Liberal Studies - Credits: 18
- CDEV 248 - Human Development and Education Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3

Junior Year- Total Hours: 30

- Liberal Studies - Credits: 12
- CDEV 342 - Educational Psychology Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3 (summer)
- PREE 361 - Environmental Teaching Credits: 3
- PREE 464 - Environmental Decision Making Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3


## Senior Year - Total Hours: 33

- PREE Electives - Credits: 12
- ELEC 320 - Elementary Field Experience Credits: 3
- ELEC 332 - The Teaching of Elementary Reading Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (with cert.) or
- PREE 455 - Student Teaching - Environmental Education Credits: 12, 6, 3 (without cert.) (without cert.)


## Environmental Geoscience (BA)

The environmental geoscience (BA) focuses on providing students with a scientific understanding of the Earth and surrounding environment. The student in geology gains an understanding of the various terrestrial processes and features (mountains, oceans, volcanoes, glaciers); the immenseness of geologic time, the history of the earth and organisms that inhabit it (fossils); the role of water, fuel, and mineral resources in the development of civilization; and the close interaction between the geologic and organic environments.

Students who desire to combine interests in geology and other fields such as education, business, recreation, environmental sciences, or language may prefer the environmental geoscience (BA) because its relatively small number of courses allows students to take a second major or minor in another field.

## Requirements for the Major - Credits: 39

Required Courses - Credits: 22

- EGEO 100 - Environmental Geology Credits: 3
or
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 110 - Environmental Geology Lab Credits: 1 or
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- EGEO 271-Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 281 - Quantitative Methods Credits: 2


## Electives - Credits: 13

any EGEO course above 200

- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3
- G\&ES 425-Advanced Geographic Information Systems Credits: 3
- MARS 362 - Marine Geology Credits: 3


## Related Courses - Credits: 4

- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1


## Degree Completion in Four Years Environmental Geoscience (BA)

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 12
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- EGEO 100 - Environmental Geology Credits: 3 or
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 110 - Environmental Geology Lab Credits: 1 or
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 3
- Language 101 - Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- MATH 125 - Precalculus Credits: 4
or
- MATH 225 - Calculus I Credits: 4
- PHYS 201 - Elements of Physics I Credits: 3 or
- PHYS 211 - General Physics I Credits: 4

Junior Year - Total Hours: 30

- Language 102 - Credits: 3
- Language 103 - Credits: 3
- Major ELEC - Credits: 3 (select from list)
- Liberal Studies - Credits: 15
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- ENGL 210 - Interpreting Literature Credits: 3
- Major ELEC - Credits: 10 (select from list)
- Liberal Studies/Electives - Credits: 18
- EGEO 281 - Quantitative Methods Credits: 2


# Environmental Geoscience (BS) - Track in Environmental Science 

## Coordinator

Michael Stapleton
Environmental science is the integration of scientific knowledge from many disciplines in order to understand the interrelationships between human activities and the environment. Environmental science majors are exposed to the general principles of biology, chemistry, geology, meteorology, and physics. Thus, it is not a focus on one of these disciplines, but involves all of them and their interaction within environmental systems.

Environmental science majors could enter several general fields:

- Industry and Consulting, monitoring and investigating the contamination of the air, land and water. Responsibilities could range from working to reduce potential environmental contamination in an industrial setting, to remediating contamination that resulted from past disposal practices.
- Local, State, or Federal Environmental Agencies, working to monitor, enforce, and develop environmental policy and regulations.
- Environmental Research, working to understand and solve environmental problems. Students would continue their education in a graduate program focusing on an area of interest to them.
The program takes four years of full time study to complete. Students with associate degrees and transfer students are welcome and could complete the program in less time based upon their prior classes taken. The program is rich in laboratory and field experiences that support our lecture classes. Students gain important practical experience working in the field studying environmental systems and problems. In addition, students are required to complete an approved internship or research project. We train our students not only with a liberal arts education and a broad-based scientific background, but with the skills that will enable them to succeed in a competitive work force. The department encourages undergraduate student research. Opportunities abound for students to work directly with the faculty on independent research projects.

ENVS 450 or 480 must be completed during the summer after your Junior or Senior year.

## Requirements for the Major - Credits: 60

## Required Core Courses - Credits: 33

- BIOL 357 - Environmental Microbiology Credits: 4
- BIOL 401 - Ecology Credits: 3
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 451 - Geochemistry Credits: 4
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Elective Major Courses - Credits: 8

- MARS Summer Course
- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3
- CHEM 240 - Industrial Hygiene Credits: 3
- CHEM 340 - Air Quality Assessment Credits: 4
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 430 - Industrial Pollution Control Engineering Credits: 3
- EGEO 231 - Aerial Photography Interpretation Credits: 3
- EGEO 241 - Geomorphology Credits: 3
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 328 - Plate Tectonics Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 453-Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3


## Required Internship or Research (3 Credits From One of the Following)

- ENVS 450 - Environmental Science Internship Credits: 3 to 12
- ENVS 480 - Environmental Systems Analysis Credits: 3


## Other Required Courses - Credits: 16

- BIOL 101 - General Biology Credits: 3
- BIOL 325 - Biometry Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- PHYS 213-General Physics III Credits: 3

Degree Completion in Four Years Environmental Science (BS)

Completion Hours: 120
Freshman Year - Total Hours: 29

- Liberal Studies - Credits: 3
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 225 - Calculus I Credits: 4

Sophomore Year - Total Hours: 28

- Liberal Studies - Credits: 3
- BIOL 101 - General Biology Credits: 3
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- COMM 200 - Public Speaking Credits: 3
- EGEO 121 - Meteorology Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- PHYS 211 - General Physics I Credits: 4
- PHYS 213-General Physics III Credits: 3

Junior Year - Total Hours: 32

- Major Elective - Credits: 3
- Liberal Studies/Electives - Credits: 16
- BIOL 325 - Biometry Credits: 3
- BIOL 357 - Environmental Microbiology Credits: 4
- BIOL 401 - Ecology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3


## Senior Year - Total Hours: 31

- Major Electives - Credits: 5
- Liberal Studies/Electives - Credits: 14
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 451 - Geochemistry Credits: 4
- ENVS 450 - Environmental Science Internship Credits: 3 to 12 or
- ENVS 480 - Environmental Systems Analysis Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Environmental Geoscience (BS) - Track in Geology

The environmental geoscience (BS) track in geology focuses on providing students with a scientific understanding of the Earth and surrounding environment. The student in geology gains an understanding of the various terrestrial processes and features (mountains, oceans, volcanoes, glaciers); the immenseness of geologic time, the history of the earth and organisms that inhabit it (fossils); the role of water, fuel, and mineral resources in the development of civilization; and the close interaction between the geologic and organic environments.

Demand for the professional geologist comes from the needs of engineering, hydrogeologic and environmental firms; geological surveys; oil, gas and mining companies; state and national parks; museums; conservation agencies; planning commissions; and teaching institutions. A student who completes a bachelor of science in geology will have the basis for entry to graduate schools or for employment as a geologist.

## Requirements for the Major - Credits: 59

## Required Core Courses - Credits: 32

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 103/303 - Concepts of Evolution and the Fossil Record Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 271-Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 304 - Paleontology Laboratory Credits: 1
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 351 - Mineralogy Credits: 4
- EGEO 352 - Petrology Credits: 4
- EGEO 362 - Stratigraphy Credits: 3
- EGEO 482 - Senior Seminar Credits: 1


## Elective Major Courses - Credits: 9

- EGEO 241 - Geomorphology Credits: 3
- EGEO 242 - Glacial Geology Credits: 3
- EGEO 323 - Planetary Geology Credits: 3
- EGEO 328 - Plate Tectonics Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 451 - Geochemistry Credits: 4
- EGEO 453 - Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- EGEO 498 - Selected Topics Credits: 1 to 3


## Required Field Camp - Credits: 4

At an acceptable field station.

## Other Required Courses - Credits: 14

- CHEM 108-General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 or
- G\&ES 410 - Remote Sensing Credits: 3
- MATH 230 - Calculus II Credits: 4
- PHYS 212 - General Physics II Credits: 4 or
- PHYS 213-General Physics III Credits: 3


## Degree Completion in Four Years Environmental Geosciences (BS) - Track in Geology

## Completion Hours: 120

Freshman Year - Total Hours: 28

- Liberal Studies Credits: 6
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Elective Credits: 9
- COMM 200 - Public Speaking Credits: 3
- EGEO 103/303 - Concepts of Evolution and the Fossil Record Credits: 3
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 304 - Paleontology Laboratory Credits: 1
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4

Junior Year - Total Hours: 30

- Liberal Studies Credits: 9
- EGEO 327 - Structural Geolgoy Credits: 3
- EGEO 351 - Mineralogy Credits: 4
- EGEO 352 - Petrology Credits: 4
- EGEO 362 - Stratigraphy Credits: 3
- MATH 230 - Calculus II Credits: 4
- PHYS 212 - General Physics II Credits: 4 or
- PHYS 213-General Physics III Credits: 3


## Senior Year - Total Hours: 32

- Major Electives - Credits: 9
- Liberal Studies/Electives - Credits: 13
- Field Camp - Credits: 4
- EGEO 281 - Quantitative Methods Credits: 2
- EGEO 482 - Senior Seminar Credits: 1
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 or
- G\&ES 410 - Remote Sensing Credits: 3


## Exercise Science (BS)

"My educational experience in the Exercise Science program has been one of positive influences and excellent mentoring. This positive environment motivated me to pursue my master's degree here at SRU."

Dennis Bowers' 02<br>Slippery Rock University Graduate Student

The Exercise Science program is the first to be nationally accredited by the American Society of Exercise Physiologists. In addition, the curriculum is endorsed by the American College of Sports Medicine and the National Strength and Conditioning Association. This major is designed to prepare students to serve as fitness/exercise specialists in a variety of physical fitness/health promotion programs. The theoretical coursework is concentrated in the areas of exercise physiology, physical fitness assessment and fitness/wellness programming. These specialized courses are supplemented by foundation courses selected from the natural and behavioral sciences. Practical application and experience is provided through fieldwork at the Russell Wright Fitness Center, located on the campus of Slippery Rock University. The culminating experience is a full-time (12-credit) internship in one of approximately 75 quality programs, which have cooperative agreements with the university. The internship sites are selected through careful advisement to provide the best possible experiences for students in either corporate, hospital, commercial or community settings. Furthermore, students have the opportunity to attend regional and national professional meetings, be active participants in the Exercise Science Society, and assist faculty in research projects and activities.

Employment opportunities are available in YMCA's, corporate fitness and health promotion programs, wellness centers, health spas and fitness clubs and various clinical and rehabilitative centers.

## Policy for Admission into the Exercise Science Major

University acceptance to pursue the Exercise Science major does not guarantee admission into the exercise science program. Formal application to the Exercise Science major must be completed by the student according to the following procedures:

1. It is the student's responsibility to submit an Application to the Major form to the Exercise and Rehabilitative Sciences Department Chair's Office (115 West Gym) during the semester in which he/she is enrolled and would earn a total of 48 credit hours.
2. The application must be submitted by December 1 st in the fall and May 1 st in the spring.
3. Entering transfers from other universities with earned credits beyond 48 hours have a one-semester grace period.
4. On or before the beginning of the following semester students will receive notification of acceptance or denial to the major according to the following:
a. Acceptance

The student has fulfilled all major requirements listed on the Degree Audit Report (DARS) in the section "Prerequisites For Admission to Exercise Science Program" and has an overall and major QPA of 2.75 or higher. Once the student has been accepted into the Exercise Science major, it will take the student at least three semesters to complete the curriculum plus a 12 -credit internship.
b. First Denial

Not fulfilling the requirements as stated above will result in a first denial. Failure to submit an application will also result in a first denial. Students who are denied for the first time are not permitted to take upper level Exercise Science coded courses. Students must reapply for a second time the following semester.
c. Second Denial

If students do not meet the requirements again, they are denied the second time. Failure to submit an application will also result in a second denial. In the case of a second denial, students are not retained in the major and their major is changed to Exploratory. Students are not permitted to reapply to the Exercise Science major for one year following a second denial. If after one year the student has an overall QPA of 2.75 , he/she may reapply and repeat the application process as stated previously.

## Policy for Retention in the Exercise Science Major

Students who are admitted into the program must maintain a major and overall QPA of 2.75 or higher. Students are not permitted to do their internships unless they have met QPA standards. Failure to maintain academic standards will result in a one-semester probation in which the student must remedy QPA deficiencies. If the necessary QPA requirements are not attained after one semester of probation, the student will be removed from the program.

## Policy for Changing to the Exercise Science Major

Any student changing their major to Exercise Science must have an overall QPA of 2.75 or higher.

## Requirements for the Major - Credits: 60

## Required Courses

## Exercise Science Core Courses - Credits: 21

- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3

Specialization Area Courses - Credits: 30

- ERS 450 - Exercise Science Internship Credits: 12
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3

Liberal Studies Courses - Credits: 9

- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3


## Degree Completion in 4 Years Exercise Science (BS)

Completion Hours: 120
Freshman Year - Total Hours: 32

- Liberal Studies/Electives - Credits: 20
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 15
- BIOL 216 - Anatomy and Physiology Credits: 3
or
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 12
- BIOL 216 - Anatomy and Physiology Credits: 3
or
- BIOL 217 - Anatomy and Physiology Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3


## Senior Year - Total Hours: 28

- Liberal Studies/Electives - Credits: 4
- ERS 450 - Exercise Science Internship Credits: 12
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3


## Finance (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in finance. Finance teaches students about the financial operations and financial management of firms. Students learn about the financial records of firms, the character and appraisal of corporate securities, and financial techniques used in all phases of the discipline. In addition, students may choose elective subjects which permit them to aim at a particular segment of finance, such as corporate finance, commercial and investment banking, and financial planning. Certain courses are offered each semester; others are cycled every other semester or every other year to provide the greatest diversification possible.

Finance majors are encouraged to join both the Financial Management Association, an international honor society in finance, and the Economics, Finance, and International Business Club. These organizations sponsor a variety of professional and social activities for students such as informal gatherings among students, invited speakers, tours and travel.

All majors are encouraged to do an internship in the summer semester between their junior and senior year. Students may seek placements in their individual area of interest. Internships are available in the areas of banking, insurance, financial advising, financial services, manufacturing and government. In today's market, employers often offer internships to attract qualified students to their firms.

Finance majors are particularly well suited for positions in the private or public sector that require knowledge of financial institutions and financial operations such as banks, insurance companies and real estate firms. Students are also well prepared for graduate and professional schools. The finance major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 60

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320-Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Required Non-Business Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3

Two Elective Courses - Credits: 6

Elective Courses are Selected from Other 300- and 400-Level Finance Courses

## Degree Completion in Four Years Finance (BSBA)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- Math Requirement - Credits: 3
- Liberal Studies Elective - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies Electives - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- MGMT 251 - Organizational Behavior Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies Electives - Credits: 12
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Senior Year - Total Hours: 30

- Liberal Studies Electives - Credits: 15
- Finance Electives - Credits: 6
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3
- MGMT 458 - Business Policy Credits: 3


## First Year Studies

## First Year Studies begins with a Rock Solid Orientation

FYRST begins with an orientation program during which students are introduced to the campus, to a FYRST faculty advisor, and to many institutional resources and services. New student orientation is designed to help students achieve a successful transition to university life. Slippery Rock employs new and innovative ways to greet new students in their first few days on campus
and assist them continually throughout their first year. New students who are admitted early have the opportunity to attend an early orientation program in the spring of their senior year. These students receive a head start on their college experience by scheduling for classes, receiving financial aid information, making and securing living arrangements, and meeting new friends, faculty, and college staff. The orientation program, which is conducted in June, is comprised of an overnight experience and more time to explore the campus and its resources. In August, new students are invited back to campus prior to the beginning of the fall semester for a welcome orientation session.

## Academic Advisement

Academic Advisement is perhaps the most important faculty/student relationship outside the classroom. The University's academic advisement system is comprised of two primary organizational structures that include First Year Studies advisement and upper-class student/transfer student advisement.

# First Year Studies (FYRST) Advisement 


#### Abstract

All academic advisement of new freshmen is coordinated and directed by FYRST. The mission of FYRST advising is to personalize the first year by ensuring that every student receives a high standard of academic advisement services from pre-enrollment to orientation, and throughout the student's first year. FYRST advising provides assistance that will help students to acquire the knowledge and skills necessary to select an academic program or major which best suits their individual abilities, interests and career goals. During the student's enrollment in FYRST, he/she should develop a more thorough understanding of his/her own purpose and goals in college as well as those of the university. If a new freshman has declared a major, advisement will be provided by a faculty member selected from the major department. If no major has been declared, the student will be actively involved in the Exploratory Program and advised by a selected faculty member who has volunteered to work with students who have not decided upon a major. Progression through FYRST will be assisted by the faculty advisor, however, it is the student's responsibility to see that he/she meets all requirements of the degree granting college so that upon completion of the first year of study, the student has attained the minimum number of credits, the specified courses and the minimum quality point average required by the major department.


## Upper-class Student/Transfer Student Advisement

As a student progresses from FYRST to the degree-granting college, some departments may reassign their students to different academic advisors during the upper-division years, while other departments may permit the student to retain the FYRST advisor throughout his/her years of study at the university. Upon entrance into the university, new transfer students are assigned academic advisors from their major program.

## Exploratory (Undeclared) Program

Students entering the university who are exploring majors participate in the Exploratory Program. These students are advised by FYRST advisors who volunteer their time to advise students as part of the Exploratory Program. The faculty identified as FYRST Exploratory advisors have an interest in and a commitment to assisting new students in their transition to college life.

## Advisement Development

The Academic Advisement Center is responsible for developing advisor and student advising resources, conducting advisor training and first year student advising informational workshops, and maintaining its involvement in retentionrelated and first-year research activities.

## Learning Community Clusters

The university recently implemented a learning community cluster program which includes a freshman seminar for the purpose of improving students' academic and social integration and establishing an educational environment that maximizes both student-student interaction, student-faculty and student-professional staff interaction. The transition to university life can be challenging and even stressful. The academic and social advantages provided by joining a learning community cluster and freshman seminar initiative can help reduce that stress. By enrolling in the same classes, students are encouraged to meet new people, make friends easily, form study groups, participate in class discussions, and become engaged with their professors.

Research has shown that the more students connect to the university, the more successful they are in their college experience. Our research shows that by enhancing a student's sense of community and involvement, the freshman seminar and learning community clusters contribute to higher retention rates. Because both freshman seminars and
learning communities promote active learning and foster collaboration and cooperation, students who participate are higher achievers and more involved in their classes.

## Freshman Seminar (FYRST Seminar)

The freshman seminar course is designed especially to enhance the academic, social, and personal integration of the student by focusing on transition topics related to the college environment (e.g., time management, active learning strategies, note-taking skills, test preparation, goal setting, use of campus technology, academic advising, major and career exploration, professional development in the technology fields, diversity, relationship issues, and issues of wellness).

## Academic and Learning Assistance Resources

Housed in the Academic Services Center are a series of academic and learning assistance resources for students. This resource center offers free materials on first-year and adult academic transition tools; learning assistance resources on time management, effective reading, test preparation, test taking and note taking; and academic advising resources on scheduling tips, quality point average calculations, and information on major and career selection.

## Tutorial Center

Slippery Rock University's Tutorial Center assists undergraduate students in meeting their academic goals with peer individual and group tutoring services, study skills workshops, and Supplemental Instruction (SI). Emphasis upon basic skills and upon the Liberal Studies areas, study skills instruction and support, communication with faculty, and extensive training and supervision of tutors meets students' immediate academic and content based needs and provides them with effective and transferable study skills. Tutorial services at Slippery Rock University are personalized and tailored to individuals' academic needs.

Tutoring services also include the proactive Supplemental Instruction (SI) model for academic assistance. Students hired as leaders attend assigned classes and work closely with enrolled students to model and teach study skills strategies. Leaders facilitate group-tutoring sessions emphasizing cooperative learning activities.

Individual tutoring sessions for students are scheduled by appointment or on a drop-in basis, whereas group and SI sessions are scheduled to accommodate the greatest number of interested students.

## College Skills Workshops

During the fall, the Tutorial Center offers an array of workshops designed to help students succeed in college. All students are eligible to participate in the workshops on such topics as managing time, taking effective class notes, reading texts, building a strong memory, increasing test-taking skills.

## French (BA)

The study of French language and culture is a passport to the past, the present, and the future. With it the student can go back in time to the dawn of French civilization and follow its development from before the Gallo-Roman period through the Middle Ages, with the flowering of the great cathedrals, into the Renaissance graced by its many chateaux, and on to the glories of imperial France under Louis XIV. Armed with knowledge of French, the student will better understand also the Enlightenment, whose numerous great French philosophers carved out the principle of both the American and the French revolutions, and the developments which followed them, bringing the modern world into being. The passport of French studies will also serve to open doors for the student in today's world where French is a
principal language in 43 countries and where knowledge of French is constantly needed in critical diplomatic situations. France will most surely maintain its political and commercial leadership in the world as it enters the 21st century.

Students have the opportunity to participate in the French Club and Pi Delta Phi, the French honorary society. Majors obtain jobs in teaching, health and human services professions, international business and business-related professions, communication, and technology-related fields.

Students with previous French language experience must take the modern languages placement test to determine course eligibility. Students desiring to receive academic credit for previous experience must take the appropriate CLEP examination administered by the university. The CLEP examination must be taken before enrollment in foreign language courses for freshmen within the first few weeks of the semester.

French 101,102 , and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline.

## Requirements for the Major - Credits: 24-39

## Required Courses

- 6 credits of any 300- or 400-level French course may be chosen as an elective
- FREN 101 - French Language and Culture I Credits: 3
- FREN 102 - French Language and Culture II Credits: 0
- FREN 103 - French Language and Culture III Credits: 0
- FREN 201 - Communicating in French Credits: 3
- FREN 220 - Reading in French Credits: 3
(* see footnote)
- FREN 300 - French Grammar Review Credits: 3
- FREN 301 - Developing French Vocabulary \& Conversation Skills Credits: 3 or FREN 401 - Advanced Oral Communication Skills
- FREN 305 - French Civilization Credits: 3
- FREN 306 - Modern France Credits: 3
- FREN 320 - Main Currents in French Literature Credits: 3
- FREN 350 - French Linguistics and Phonetics Credits: 3
- FREN 400 - Advanced French Grammar Credits: 3
- FREN 401 - Advanced Oral Communication Skills Credits: 3 or FREN 301 - Developing French Vocabulary \& Conversation Skills


## Footnote

* These credits may be exempted through a department placement exam, AP credits or CLEP credits. Native speakers should consult the Department of Modern Languages and Cultures.


## Degree Completion in Four Years French (BA)

Completion Hours: 120
Freshman Year - Total Hours: 32

- PESM Activity - Credits: 1
- Liberal Studies - Credits: 12
- Electives - Credits: 6 (** see footnotes)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- FREN 102 - French Language and Culture II Credits: 0 (* see footnotes)
- FREN 103 - French Language and Culture III Credits: 0
- PE 141 - Personal Physical Fitness Credits: 1


## Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 6
- Electives - Credits: 9
- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- FREN 201 - Communicating in French Credits: 3
- FREN 220 - Reading in French Credits: 3

Junior Year - Total Hours: 33

- Liberal Studies - Credits: 9
- Electives - Credits: 12
- FREN 300 - French Grammar Review Credits: 3
- FREN 301 - Developing French Vocabulary \& Conversation Skills Credits: 3 or FREN 401 - Advanced Oral Communication Skills
- FREN 305 - French Civilization Credits: 3
- FREN 350 - French Linguistics and Phonetics Credits: 3
- FREN 401 - Advanced Oral Communication Skills Credits: 3 or FREN 301 - Developing French Vocabulary \& Conversation Skills


## Senior Year - Total Hours: 25

- FREN Literature (2) - Credits: 6
- FREN Electives - Credits: 6
- Liberal Studies - Credits: 3
- Electives - Credits: 7
- FREN 400 - Advanced French Grammar Credits: 3


## Footnotes

* Most students enter the major with at least three years of high school French and are able to exempt the 101 level. Some students are able to place higher which will allow them ample time to complete a second major or minor within a four-year sequence.
** Most of our BA candidates combine French with a second major or minor. Depending on what second major may be chosen, several of the courses from the second major may be counted in the liberal studies program as well.
*** A semester study abroad experience is highly recommended.


## Specialization: International Business

This program is designed for students who prefer the flexibility of a liberal arts program while studying the international market. Such a student may decide to enter an MBA program designed specifically for the liberal arts language major. Specific requirements for the specialization in international business are available from the Department of Modern Languages and Cultures.

## Geography (BA)

Students in the BA Geography program study the links between human beings and their environment as well as the links between one area of the earth's surface with another. The geography BA student investigates the nature of places on the earth's surface as well as the geographic study of environmental, economic, cultural, and political processes. This program emphasizes the collection, analysis, and representation of earth data at scales ranging from the local to the global. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department. If you enjoy learning about the Earth and its peoples and landscapes, either in your back yard or far away, please consider the opportunities our program provides.

The geography BA program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; and the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include: federal state, regional, and local government; National Park Service, Peace Corps, real estate developers, companies dealing with insurance, transportation, communications, and international trade, scientific and research groups, and museums.

## Requirements for the Major - Credits: 37

## Specialization: Liberal Arts Geography

## Core Courses - Credits: 15

- G\&ES 150-The Natural Environment Credits: 3
- G\&ES 302-Cultural Geography Credits: 3
- G\&ES 331 - Economic Geography Credits: 3
- G\&ES 444 - Philosophy of Geography Credits: 3
- G\&ES 489 - Field Studies Credits: 3


## Regional Courses (Select 9 Credits from the Following)

- G\&ES 107 - Environments and Peoples of the Developed World Credits: 3 or
- G\&ES 109 - Environments and Peoples of the Developing World Credits: 3
- G\&ES 201 - Latin America and the Caribbean Credits: 3
or
- G\&ES 202 - United States and Canada Credits: 3
or
- G\&ES 204 - Post-Soviet Union Credits: 3
- G\&ES 303-Asia Credits: 3
or
- G\&ES 308-Europe Credits: 3


## Technique Courses - Credits: 7 - Two Required and One Elective

- G\&ES 115-Map Reading and Interpretation Credits: 1
- G\&ES 220-General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
or
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3

Elective G\&ES Courses (Select 6 Credits at the 300 or 400 Level)
Degree Completion in Four Years Geography (BA)

Completion Hours: 120
Freshman Year - Total Hours: 28

- Liberal Studies - Credits: 15
- G\&ES Regional 1xx - Credits: 3 (* see footnote)
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 115 - Map Reading and Interpretation Credits: 1 (* see footnote)
- G\&ES 150-The Natural Environment Credits: 3 (* see footnote)

Sophomore Year - Total Hours: 32

- G\&ES Regional 2xx - Credits: 3
(* see footnote)
- Language 101 - Credits: 3 (* see footnote)
- Language 102 - Credits: 3
- (* see footnote)
- Liberal Studies - Credits: 14
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 220 - General Methods of Fieldwork Credits: 3
(* see fotenote)

Junior Year - Total Hours: 28

- G\&ES Regional 3xx - Credits: 3 (* see footnote)
- Language 103 - Credits: 3 (* see footnote)
- G\&ES Elective 1 - Credits: 3 (* see footnote)
- Liberal Studies/Elective - Credits: 13
- G\&ES 302 - Cultural Geography Credits: 3 (* see footnote)
- G\&ES 315 - Cartography I Credits: 3 (* see footnote) or
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 (* see footnote)


## Senior Year - Total Hours: 32

- G\&ES Elective 2 - Credits: 3 (* see footnote)
- Liberal Studies/Electives - Credits: 20
- G\&ES 331 - Economic Geography Credits: 3 (* see fotenote)
- G\&ES 444 - Philosophy of Geography Credits: 3 (* see footnote)
- G\&ES 489 - Field Studies Credits: 3 (* see footnote)


## Footnote

* Indicates course in major.


## Geography (BS) - Track in Environmental Studies

Coordinator

Jack Livingston
Students in the environmental studies program study the links between human beings and their environment. This program takes an interdisciplinary approach and integrates knowledge from the social and natural sciences in the study of environmental issues. An important goal of the program is for students to understand the relationships that exist between social, behavioral, and environmental systems. We emphasize the collection, analysis, and representation of earth data at scales ranging from the local to the global. Toward the end of their studies, students identify a research problem, gather and analyze data, and prepare a formal paper and presentation on their topic. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department.

The environmental studies program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include environmental consulting, pollution remediation, environmental law or public policy, outdoor education, resource management, geographic information systems analysis, nonprofit environmental organizations, and planning.

## Requirements for the Major - Credits: 55

## Required Core Courses - Credits: 15

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- G\&ES 150-The Natural Environment Credits: 3
- G\&ES 235 - Conservation Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3
- G\&ES 489 - Field Studies Credits: 3

Techniques Core - Credits: 10

- G\&ES 115-Map Reading and Interpretation Credits: 1
- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3


## Social Science Core Courses - Credits: 6

- ECON 315 - Environmental Economics Credits: 3
or
- G\&ES 331 - Economic Geography Credits: 3
- PHIL 324 - Environmental Ethics Credits: 3


## Natural Science Core Courses - Credits: 9

Please choose three of the courses below:

- BIOL 105 - Environmental Biology Credits: 3
- CHEM 107-General Chemistry I Credits: 3
- EGEO 100 - Environmental Geology Credits: 3
- PHYS 204 - Environmental Biophysics Credits: 3


## Research Skills - Credits: 3

Please choose one of the courses below:

- BIOL 325 - Biometry Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Environmental Studies Electives - Credits: 12

Choose four classes:

- BIOL 120 - Practical Botany Credits: 3
- BIOL 207 - Land Plants and Their Environment Credits: 3
- BIOL 208 - Introduction to Wildlife Management Credits: 3
- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3 (* See footnote)
- CHEM 270 - Industrial Chemistry Credits: 3 (* See footnote)
- CHEM 340 - Air Quality Assessment Credits: 4 (* See footnote)
- CHEM 370 - Water Quality Assessment Credits: 4 (* See footnote)
- ECON 315 - Environmental Economics Credits: 3 (* See footnote)
- EGEO 121 - Meteorology Credits: 3
- EGEO 131 - Oceanography Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 340-Air Pollution Meteorology Credits: 3 (* See footnote)
- EGEO 451 - Geochemistry Credits: 4 (* See footnote)
- ENGL 205 - Technical and Scientific Writing Credits: 3 (* See footnote)
- ENGL 410 - Literature of the Environment Credits: 3
- G\&ES 215 - Rural and Urban Planning Credits: 3
- G\&ES 244 - Environmental Justice Credits: 3
- G\&ES 245 - Population and Resources Credits: 3
- G\&ES 255 - General Climatology Credits: 3 (* See footnote)
- G\&ES 331 - Economic Geography Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits: 3
- HSAF 310 - Environmental Health Credits: 3
- HSAF 318 - Principles of Industrial Hygiene Credits: 3 (* See footnote)
- HSAF 348 - Hazardous Materials and Waste Management Credits: 3
- POLS 200 - State and Local Government Credits: 3
- PREE 213 - Environmental Resource Analysis Credits: 3 (* See footnote)
- PREE 412 - Open Space Planning Credits: 3


## Footnotes

* Check course prerequisite(s)

Environmental Studies students are required to perform 100 service-learning hours of their choosing.

## Degree Completion in Four Years Geography (BS)- Track in Environmental Studies

Completion Hours: 120

## Freshman Year - Total Hours: 31

- Science Core (2) Credits: 6
(* See foonote)
- Liberal Studies/Electives Credits: 12
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 115 - Map Reading and Interpretation Credits: 1 (* See foonote)
- G\&ES 135 - Introduction to Environmental Problems Credits: 3 (* See foonote)
- G\&ES 150 - The Natural Environment Credits: 3
(* See foonote)

Sophomore Year - Total Hours: 30

- Science Core Credits: 3 (* See footnote)
- ECON 202 (LS) Credits: 3
- Liberal Studies/Electives Credits: 12
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 220 - General Methods of Fieldwork Credits: 3
(* See footnote)
- G\&ES 235 - Conservation Credits: 3
(* See footnote)

Junior Year - Total Hours: 29

- Statistics Elective Credits: 3
(* See foonote)
- Major Electives (2) Credits: 6 (* See foonote)
- Liberal Studies/Electives Credits: 11
- ECON 315 - Environmental Economics Credits: 3

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(* See footnote)
or G&ES 331
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- G\&ES 315 - Cartography I Credits: 3
(* See footnote)
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
(* See footnote)
- G\&ES 331 - Economic Geography Credits: 3
or ECON 315
Senior Year - Total Hours: 30
- Major Electives (2) Credits: 6
(* See footnotes)
- Electives (Minor) Credits: 12
- Liberal Studies/Electives Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3
(* See footnote)
- G\&ES 489 - Field Studies Credits: 3
(* See footnote)
- PHIL 324 - Environmental Ethics Credits: 3


## Footnotes

* Indicates course in major.


## Geography (BS)-Track in Applied Geographic Technology

Students in the Applied Geographic Technology geography program study the links between human beings and their environment as well as the links between one area of the earth's surface with another. This program is designed to prepare students for employment in technical occupations, planning, or postgraduate studies. The applied geographic technology student investigates the geographic study of environmental, economic, cultural, and political processes and becomes proficient in the fast growing field of geographic information technology. This program emphasizes the collection, analysis, and representation of earth data at scales ranging from the local to the global. Opportunities abound for students to engage in fieldwork, internships, and in the production of research in our department. If you enjoy learning about the Earth and its peoples and landscapes, either in your back yard or far away, please consider the opportunities our program provides.

The Applied Geographic Technology program provides students with a base in liberal arts skills (critical thinking, writing, and speaking) and in analytical skills such as data collection in the field, in the library, and on the computer; the use of global positioning systems; and the use of mapping, spreadsheet, and database software. Many of our students have found work that allows them to address important environmental and social issues in the private or public sector. Representative employment areas for our graduates include environmental consulting, pollution remediation, environmental law or public policy, outdoor education, resource management, geographic information systems analysis, nonprofit environmental organizations, and planning.

## Requirements for the Major - Credits: 55

## Specialization: Applied Geographic Technology

Core Courses - Credits: 27

- G\&ES 100 - Discover Geography Credits: 3
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 215 - Rural and Urban Planning Credits: 3
- G\&ES 235 - Conservation Credits: 3
- G\&ES 302 - Cultural Geography Credits: 3
- G\&ES 324 - Environmental Law and Policy Credits: 3
- G\&ES 331 - Economic Geography Credits: 3
- G\&ES 489 - Field Studies Credits: 3

Technique Courses - Credits: 13

- G\&ES 115 - Map Reading and Interpretation Credits: 1
- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 325-Introduction to Geographic Information Systems Credits: 3
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3


## Technique Electives (Select 6 Credits)

- G\&ES 410 - Remote Sensing Credits: 3
or
- G\&ES 415 - Cartography II Credits: 3
or
- PREE 412 - Open Space Planning Credits: 3


## Regional Elective (Select 3 Credits)

- G\&ES 201 - Latin America and the Caribbean Credits: 3
- G\&ES 202 - United States and Canada Credits: 3
- G\&ES 204 - Post-Soviet Union Credits: 3
- G\&ES 303-Asia Credits: 3
- G\&ES 308 - Europe Credits: 3
- G\&ES 309 - Africa Credits: 3

Technical Communication - Credits: 3

- ENGL 205-Technical and Scientific Writing Credits: 3

Elective G\&ES Course - Credits: 3
(select 3 credits at the 200 level or above)

## Degree Completion in Four Years Applied Geographic Technology (BS)

Completion Hours: 120
Freshman Year - Total Hours: 28

- Liberal Studies - Credits: 12
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
(* see footnote)
- G\&ES 115 - Map Reading and Interpretation Credits: 1
(* see footnote)
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
(* see footnote)
- G\&ES 150 - The Natural Environment Credits: 3
(* see footnote)
Sophomore Year - Total Hours: 30
- Liberal Studies - Credits: 15
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- G\&ES 215 - Rural and Urban Planning Credits: 3
(* see footnote)
- G\&ES 220 - General Methods of Fieldwork Credits: 3
(* see footnote)
- G\&ES 235 - Conservation Credits: 3
(* see footnote)
Junior Year - Total Hours: 31
- G\&ES Regional - Credits: 3
(* see footnote)
- Liberal Studies/Electives - Credits: 13
- ENGL 205-Technical and Scientific Writing Credits: 3 (* see footnote)
- G\&ES 302 - Cultural Geography Credits: 3 (* see footnote)
- G\&ES 315 - Cartography I Credits: 3
(* see footnote)
- G\&ES 324 - Environmental Law and Policy Credits: 3
(* see footnote)
- G\&ES 325-Introduction to Geographic Information Systems Credits: 3 (* see footnote)


## Senior Year - Total Hours: 31

- G\&ES Techniques Elective - Credits: 6
(* see footnote)
- G\&ES Elective - Credits: 3
(* see footnote)
- Liberal Studies/Electives - Credits: 13
- G\&ES 331 - Economic Geography Credits: 3
(* see footnote)
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3
(* see fotenote)
- G\&ES 489 - Field Studies Credits: 3
(* see footnote)


## Footnote

* Indicates course in major.


## Health and Physical Education Certification (PostBaccalaureate Program)

## Requirements

Persons possessing a bachelor's degree may apply for admission to the post- baccalaureate program leading to health and physical education certification. This program is designed for those who have completed degree requirements in a non-education major or who desire a second certification after graduation.

The post-baccalaureate program includes up to 96 credits of coursework, including a required student teaching experience.

## Health Services Management (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in health services management. The health services management program prepares traditional and non-traditional students to assume decision-making positions within a dynamic health care environment. It accomplishes this by providing a comprehensive and current curriculum in health management. This program maintains high standards and membership in the Association of University Programs in Health Administration.

Coursework, structured extracurricular learning experiences and an internship provide an excellent foundation in this area. Students are prepared to assume a variety of positions within the health care field and are also prepared to enter highly selective graduate and professional programs.

Health services management students have pursued a variety of positions within health care systems and health-related organizations. These positions represent a broad spectrum of health care systems including hospitals, nursing homes, managed care plans, group practices, health insurance companies, pharmaceutical companies, technology firms, medical supply companies, adult day care centers, senior citizen centers, rehabilitation centers, primary care centers, retirement villages and medical centers.

Students participate in the student chapter of the American College of Health Care Executives and attend the Annual Congress of the American College of Health Care Executives held in Chicago, Illinois. Field trips include the Hospital Council of Western Pennsylvania, Hamot Medical Center, Health Policy Institute of the University of Pittsburgh, and numerous others.

Health services administration students participate in a 12-week administrative internship during the summer of their junior year or the summer of their senior year. This internship provides the linkage between the knowledge obtained throughout the curriculum and the knowledge required in the field. SRU students have been given excellent recommendations for graduate programs and employment following internships. Additionally, many students have been offered employment as a result of their excellent performance during the internship.

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Required Non-Business Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

## Internship Required

A 12-week summer internship is required as a capstone experience prior to graduation. The internship provides opportunities to obtain practical experience, to network, and to identify potential employment opportunities.

Students are encouraged to maintain active membership in the SRU student chapter and the national chapter of the American College of Healthcare Executives and other professional associations based upon special interests. Invaluable opportunities exist within the organizations and they assist with socializing students into the profession and serve as an excellent opportunity to network with administrators in the field.

## Requirements for the Major - Credits: 36

## Required Courses - Credits: 15

Historical Method (205) required of students entering the program after July 1992.

Two of the Following:

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3

Two of the Following:

- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3


## Distributional Electives - Credits: 21

Nine credits in one area and six in each of two others from the following:

## American History

- HIST 233 - African American History to 1876 Credits: 3
- HIST 234 - African American History Since 1876 Credits: 3
- HIST 237 - Outstanding Americans Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 337 - Indians of the United States Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 344 - The American City Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 351 - Latin America to 1830 Credits: 3
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 357 - Challenges of the American Experience I (to 1865) Credits: 3
- HIST 358 - Challenges of the American Experience II (1865 to the e Present) Credits: 3
- HIST 435 - Pennsylvania Credits: 3
- HIST 437 - Westward Movement Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HIST 451 - U.S. Foreign Relations to 1890 Credits: 3
- HIST 452 - U.S. Foreign Relations Since 1890 Credits: 3
- HIST 453-American Constitutional History and Law Credits: 3
- HIST 455 - Economic U.S. History Credits: 3


## Non-Western History

- HIST 286 - Modern Japan Credits: 3
- HIST 362 - Africa North of the Zambezi Credits: 3
- HIST 363 - Southern Africa Credits: 3
- HIST 370 - History and the Bible Credits: 3
- HIST 371 - History of Jews Credits: 3
- HIST 380 - Egyptology Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- HIST 462 - The Contemporary Middle East Credits: 3


## European History

- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 305 - Russia to 1855 Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3
- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since 1689 Credits: 3
- HIST 422 - Greece and Rome Credits: 3
- HIST 424 - The Middle Ages Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3
- HIST 427 - Nineteenth Century Europe Credits: 3


## Degree Completion in Four Years History (BA)

Completion Hours: 120

## Freshman Year - Total Hours: 31

- PESM Activity - Credits: 1
- CHEM 104 - Introduction Chemistry I Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
- G\&ES 202 - United States and Canada Credits: 3
- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 201 - Colonial America to 1825 Credits: 3
- PSYC 100 - Psychology Applied Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3
- THEA 141 - Introduction to the Theatre Credits: 3

Sophomore Year - Total Hours: 31

- ART 112 - Basic Studio Ceramics Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3
- HIST 205 - Historians Craft Credits: 3
- HIST 286 - Modern Japan Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- SPAN 102 - Spanish Language \& Culture II Credits: 3


## Junior Year - Total Hours: 30

- BIOL 101 - General Biology Credits: 3
- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 370 - History and the Bible Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- SASW 105 - Human Diversity Credits: 3
- SASW 106 - Race and Ethnic Diversity in the U.S.A. Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3


## Senior Year - Total Hours: 28

- PHIL 323 - Credits: 3
- Internship - Credits: 6
- Electives - Credits: 13
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 437 - Westward Movement Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3


## Honors

128 Founders Hall
724-738-3722

## Director

Steven Strain

## Secretary

Julie Graham
Slippery Rock University's Honors Program is designed to enrich the university experience by fostering a studentcentered learning environment and helping each student develop her or his individual potential as a life-long learner. Designed to encourage critical thinking and communication skills, honors courses emphasize reading, writing and research and encourage students to assume responsibility for their learning experiences, both on and off campus,
through discussion-based classes and by participating in service-learning opportunities. Students in the program are fine scholars, but they are also committed to taking full advantage of their years spent at Slippery Rock University by participating in the extra-curricular and travel opportunities which the program offers.

All honors courses fulfill liberal studies requirements, which means that participation in the program will not extend a student's stay at Slippery Rock University. To graduate with an honors designation, students must complete a minimum of seven honors courses ( 21 credits) while maintaining an overall QPA of 3.25 or higher. Students may select from a variety of specially-designed courses in the following departments: communication, computer science, English, government and public affairs, history, mathematics, music, philosophy, biology, chemistry, geography, allied health, and environmental science.

Students also have the opportunity to take Great Books courses, which are geared toward extensive reading in a specialized area. Content of these seminars varies from semester to semester and have included, The Holocaust (Germany), Latin American History (Panama), Galileo (Florence), and Irish Playwrites (Ireland). Because a research component is required, this course can be especially valuable for students contemplating graduate education. In addition, the program has an honors thesis option, which would count as a 3-credit 300 -level course.

Honors students enjoy a number of benefits, both in and out of the classroom, including seminar-style classrooms where enrollment is typically capped at 20 or 25 students per class; early registration privileges; and learning experiences through national and international travel opportunities. In recent years, students have presented at national honors conferences in Chicago, Los Angeles, Brooklyn and at regional conferences in Puerto Rico, Gettysburg, and the Adirondacks. In addition, courses are offered every spring and summer, which include travel abroad; in the past, students have traveled to Turkey, South Africa, and Ecuador.

The program is open to all qualified students, regardless of their major field of interest. Interested students must enroll formally by completing an application and submitting a one-page typed essay in which they discuss what they hope to gain from their university experience. If you are interested in participating, please call 724-738-3722 or e-mail honorsprogram@sru.edu

## Human Resource Management (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in human resource management. The human resource management major allows students to specialize in an area of business where the focus is on effectively managing employees or "human resources." Students are provided with an in-depth understanding of all areas of HR including labor relations, compensation, training, recruitment, employee safety, and employment law. Graduates are prepared for careers as an HR generalist or an HR specialist who focuses on one specific aspect of HR. The human resource management major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 63

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3 or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 9

- CPSC 210 - Productivity Software Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3 or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

- MGMT 354 - Human Resources Management Credits: 3
- MGMT 364 - Recruitment and Selection Credits: 3
- MGMT 451 - Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455-Compensation Management Credits: 3
- MGMT 460 - Training and Development Credits: 3


## Degree Completion in Four Year Human Resource Management (BSBA)

Completion Hours: 120

## Freshman Year - Total Hours: 30

- PESM Elective (2) - Credits: 2
- Math Requirement - Credits: 3
- LS/Elective - Credits: 10
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3


## Sophomore Year - Total Hours: 30

- LS/Electives - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3


## Junior Year - Total Hours: 30

- LS/Elective - Credits: 12
- FIN 320 - Managerial Finance Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 451 - Employment Law Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Senior Year - Total Hours: 30

- LS/Elective - Credits: 15
- MGMT 364 - Recruitment and Selection Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MGMT 460 - Training and Development Credits: 3


## Information Systems (BS)

The major in information systems emphasizes the application aspect of computer technology that will enable the student to solve problems in a variety of fields. Courses covering fundamentals of information technology as well as programming skills provide the foundation for essential conceptual knowledge and necessary practical relevance. In addition to completing the required computer science courses, an information systems major must complete the courses in one of the allied areas of specialization.

Graduation requirements for all students pursuing the bachelor of science degree with the major of information systems include a minimum 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Allied Area, and a minimum 2.000 quality point average in all course work completed at Slippery Rock University.

Note: For transfer students to earn the bachelor of science degree with a major in information systems, the required course work for the major must include a minimum of three computer science courses ( 9 credits) at the 200 -level or above, at least two of which must be at the 300 level or above, and completed at Slippery Rock University.

## Requirements for the Major - Credits: 52-57

## Required Courses - Credits: 31

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Three Hours From:

- CPSC 236 - Selected Computer Languages Credits: 3
or
- CPSC 305 - Introduction to Expert Systems Credits: 3
or
- CPSC 370 - Assembly Language and Machine Organization Credits: 3
or
- CPSC 450 - Internship Credits: 3 to 12


## Business Allied Courses

For An Allied Area in Accounting, Economics, Finance, Management, and Marketing, additional 9 hours are required:

- ECON 219 - Business Statistics Credits: 3
or MGMT 219
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
or
- MATH 225 - Calculus I Credits: 4


## Accounting - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
or ACCT 309 Cost Accounting I or ACCT 314 Intermediate Accounting II
- ACCT 313 - Intermediate Accounting I Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
or CPSC 365


## Economics - Credits: 18

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 301 - Macroeconomic Analysis Credits: 3
or ECON 302 Microeconomics Analysis
- ECON 318 - Intermediate Statistical Analysis Credits: 3
or ECON 407 International Economics
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
or CPSC 365

3 hours at 300 or 400 level in Economics.
Finance - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3 or FIN 323 Financial Markets and Institutions
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365

Management - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3 or ECON 202 Principles of Microeconomics
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365

Marketing - Credits: 18

- ACCT 209 - Fundamental Accounting I Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365
- MRKT 230 - Principles of Marketing Credits: 3
- MRKT 332 - Business Marketing Credits: 3 or MRKT 338 E-Commerce
- MRKT 333 - Consumer Behavior Credits: 3


# Degree Completion in Four Years Information Systems (BS) 

## Completion Hours: 120

For Business Allied Areas of: Accounting, Economics, Finance, Management, Marketing

## Freshman Year - Credits: 30

- FYRST Seminar - Credits: 1
- Liberal Studies - Credits: 11
- Allied Area - Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3


## Sophomore Year - Total Hours: 30

- Allied Area - Credits: 3
- Liberal Studies - Credits: 10 or 11
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219 Business Statistics
- MATH 131 - Discrete Mathematics Credits: 3
or
- MATH 225 - Calculus I Credits: 4


## Junior Year - Total Hours: 30

- Allied Area 300+- Credits: 3
- Allied Area - Credits: 3
- Liberal Studies 300+ - Credits: 6
- Free Elective - Credits: 3
- Liberal Studies - Credits: 9
- CPSC Elective - Credits: 3
- CPSC 343 - File Processing Credits: 3

Senior Year - Total Hours: 30

- Allied Area 300+ - Credits: 6
- Free Electives - Credits: 9
- Liberal Studies - Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Other Allied Areas

For Allied Areas in Administrative Psychology, Communication, English, Geological Technician, Human Factors, and Sport Management: 3 hours from:

- ECON 219 - Business Statistics Credits: 3 or MGMT 219 Business Statistics or MATH 122 Matrices and Linear Programming or MATH 123 Introduction to Applied Calculus


## Required Allied Area

(choose one area from the following areas):

## Administrative Psychology - Credits: 21

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 210 - Introduction to Industrial-Organizational Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3
- PSYC 310 - Organization and Management Credits: 3

One Course from Each of the Pairs Below:

- PSYC 244
or
- PSYC 277
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- PSYC 377 - Social Psychology Credits: 3
- PSYC 449 - Seminar in Psychology Credits: 3


## Communication - Credits: 21

Three credits from:

- COMM 110 - Communication Concepts Credits: 3 3 Credits


## Six Credits From:

- COMM 215 - Small Group Communication Credits: 3
- COMM 217 - Intercultural Communication Credits: 3
- COMM 231 - Introduction to Public Relations Credits: 3
- COMM 232 - Publication Production Credits: 3


## Six Credits From:

- COMM 258 - Interactive Multimedia I Credits: 3
- COMM 310 - Communication Research Methods Credits: 3
- COMM 315 - Organizational Communication Credits: 3
- COMM 318 - Professional Presentation Credits: 3
- COMM 360 - Corporate Media Credits: 3
- COMM 450 - Internship Credits: 3 to 12

Three Credits From:

- COMM 410 - Communication Law Credits: 3
- COMM 412 - Speech, Language \& Human Experience Credits: 3
- COMM 413 - Communication Theory Credits: 3


## Three Credits From:

- COMM 480 - The Communication Age Credits: 3


## English - Credits: 24

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205 - Technical and Scientific Writing Credits: 3
- ENGL 307 - Writing for Electronic Media and Film Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3


## 3 Hours of 300 or 400-Level English Courses.

## Geological Technician - Credits: 23

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 201 - Earth Materials Credits: 3
- EGEO 271 - Geotechniques: Lab Credits: 2
- EGEO 272 - Geotechniques: Geologic Reports Credits: 1
- EGEO 360 - Introduction to Hydrology Credits: 3

Three Credits From:

- EGEO 231 - Aerial Photography Interpretation Credits: 3 or
- EGEO 241 - Geomorphology Credits: 3

Three Credits From:

- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3
or
- G\&ES 410 - Remote Sensing Credits: 3

Human Factors - Credits: 21

- PSYC 105 - Introduction to Psychology Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- PSYC 306 - Introduction to Pyschological Testing Credits: 3

One Of

- PSYC 303 - Learning Credits: 3
- PSYC 311 - Physiological Psychology Credits: 3


## One Of

- PSYC 233 - Sensation \& Perception Credits: 3
or
- PSYC 338 - Cognitive Psychology Credits: 3

One Of

- PSYC 421 - Research Methods and Statistical Applications II Credits: 3 and/or
- PSYC 449 - Seminar in Psychology Credits: 3

Sport Management - Credits: 20

- PESM 286
- PE 270 - Psychological and Sociological Bases of Sport Credits: 3
- SPMT 150 - Practical Application Credits: 1

PESM 150-01, 150-02

- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3
- SPMT 394 - Sport Marketing Credits: 3
- SPMT 506 - Sport Facility and Event Management Credits: 3


## Degree Completion in Four Year Information Systems (BS)

## Completion Hours: 120

For Other Allied Areas of: Administrative Psychology, Communication, English, Geological Technician, Human Factors, Sport Management

Freshman Year - Total Hours: 30

- FYRST Seminar - Credits: 1
- MATH or Bus. Stats - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 31

- Allied Area - Credits: 6
- Liberal Studies - Credits: 9
- COMM 200 - Public Speaking Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3


## Junior Year - Total Hours: 30

- CPSC Elective - Credits: 3
- Allied Area - Credits: 6
- Liberal Studies (300+ level) - Credits: 12
- Electives - Credits: 6
- CPSC 343 - File Processing Credits: 3


## Senior Year - Total Hours: 29

- Allied Area - Credits: 6
- Electives (300+ level) - Credits: 3
- Electives - Credits: 8
- COMM 413 - Communication Theory Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 443 - Software Project Management Credits: 3


## Information Technology (BS)

The Information Technology (IT) program provides students with an opportunity to examine information gathering, retrieval, management, and storage capabilities with respect to information technology. The program also provides students with tools and techniques needed for creating and maintaining highly interactive computer systems while strengthening the student's problem solving and critical thinking abilities. The scope of the program includes decision making, social and ethical professionalism, information management, incorporation of audio and video into software applications, computer networking, and system administration. Graduates of this program will possess technical abilities to maintain computing systems that are used not only by programmers and database managers, but also remotely by employees and often customers.

Graduation requirements for all students pursuing the bachelor of science degree with the major of information technology include a minimum of 2.000 quality point average in courses taken at Slippery Rock University that will fulfill the major requirements stated below under Required Courses and Required Electives, and a minimum 2.000 quality point average in all coursework completed at the university.

For transfer students to earn the bachelor of science degree with a major in information technology, the required coursework must include a minimum of four computer science courses ( 12 credits), at least two of which must be numbered 413 or above, completed at Slippery Rock University.

## Requirements for the Major - Credits: 57

## Required Courses - Credits: 42

- ART 114 - Basic Studio Digital Media Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
or ECON/MGMT 219 Business Statistics


## Electives

Select 2 courses from one of the following areas:

## Management:

Any MGMT course numbered 300 or above. and - MGMT 250 - Principles of Management Credits: 3

Marketing:

Any MKTG course numbered 300 or above. and

- MRKT 230 - Principles of Marketing Credits: 3

Art:

- ART 214 - Art Synthesis Digital Media Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Select 3 Courses

2 must be numbered 300 or above:

- ACCT 205 - Accounting for Decision Makers Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 353 - Media Project Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- MGMT 365 - Management Information Systems Credits: 3 or CPSC 365

Degree Completion in Four Years Information Technology (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 31

- FYRST Seminar - Credits: 1
- CPSC IT Elective - Credits: 3
- Liberal Studies - Credits: 12
- Free Elective - Credits: 3
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3


## Sophomore Year - Total Hours: 30

- Free Elective - Credits: 6
- Liberal Studies - Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3
- COMM 200 - Public Speaking Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3 or ECON/MGMT 219 Business Statistics

Junior Year - Total Hours: 30

- MRKT/MGMT/ART Elective 300+ - Credits: 3
- 1 course in MRKT, MGMT or ART - Credits: 3
- Liberal Studies - Credits: 12
- CPSC IT Elective - Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 317 - Scripting Languages Credits: 3
- CPSC 413 - Systems Analysis Credits: 3


## Senior Year - Total Hours: 30

- Liberal Studies 300+ - Credits: 3
- Liberal Studies - Credits: 9
- CPSC IT Elective - Credits: 3
- Free Electives - Credits: 6
- CPSC 327 - Administration and Security Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3


# Institute for Community, Service-Learning, and Nonprofit Leadership 

Lowry Center

724-738-CARE(2273)

## Director

Alice Kaiser-Drobney
Special Programs Coordinator
Laurel Dagnon

## Secretary

Becky Cress
Slippery Rock University students, joined by faculty, staff and others lead the way to make a difference. SRU's nationally recognized Institute for Community, Service-Learning, and Nonprofit Leadership operates a system for leveraging social capital to develop socially responsible, civic-minded youth. The Institute prepares people, in partnership with their communities, to connect intellect, interpersonal skills, and personal passion for purposeful action that adds value to both the lives of students who serve and those they serve.

Community service, volunteerism, and service-learning are significant elements in the curricular and co-curricular experiences of Slippery Rock University students. The climate for service at Slippery Rock University is dramatic:

- The new I-CARE House, located in New Castle, PA, is at once a comprehensive community center and servicelearning field site where students across all majors use academic skills to enhance quality of life in a low-income neighborhood.
- The university supports the AmeriCorps program where thirty-five students earn up to $\$ 1800$ toward payment of educational costs.
- All elementary and special education majors participate in a service-learning workshop and complete a minimum of two service-learning components in their coursework.
- Environmental studies majors complete 100 hours of service for graduation.
- Sport management majors provide 200 hours of service prior to graduation.
- More than eighty faculty include service-learning or volunteer projects as part of their course requirements.
- More than 200 classes with service-learning components are offered across all academic colleges each semester.
- Dozens of faculty members have received service-learning mini-grants to underwrite the costs of service components.
- The number of international service-learning experiences and course-based, credit-bearing service-learning opportunities grow each year, including preparation of a civil society summit that will take place in the Czech Republic and an English course focusing on fiction and social issues of California.
- Service learning is one of the three required components in the Honors Program.

Through the Institute and the Department of Government and Public Affairs, students can earn a national certificate from American Humanics, the nation's only certifying body for entry-level human services and nonprofit professionals. The certificate is offered at fewer than 100 colleges and universities across the United States and is linked to eighteen major nonprofit organizations such as Big Brothers, Big Sisters, American Red Cross, YMCA, and YWCA. This program and the AmeriCorps program provide students with the skills necessary for a career path or a personal goal of working in a non-profit, non-governmental organization. The courses in the Humanics Certificate are intended to meet and enhance the three criteria for service-learning experiences: training for, participation in, and evaluation of meaningful public service opportunities. All students are invited to visit the Institute for Community, Service-Learning, and Nonprofit Leadership that is located in Lowry Center and are encouraged to become involved.

## International Business (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in international business. This major combines the study of a foreign language and culture or the study of the political, legal and economic structures of different world regions with the business core through a set of courses especially tailored to the global marketplace. Students are well prepared for jobs in the private or public sector and would be particularly attractive candidates for employment in organizations with foreign operations.

International business is a very exciting and dynamic field with exceptional career opportunities. Majors in this program are strongly recommended to complete a minor in a supporting area such as finance or marketing. Many students also complete a modern language minor. This makes the international business major exceptionally employable with a diverse host of small and large firms in manufacturing, services, financial services, insurance, investment and commercial banks, and government agencies; all of which have a growing involvement with the international marketplace. A significant majority of our graduates find employment in their field of study or enter graduate programs. The international business major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## International Experience Requirement:

- Study abroad with credits transferred back to SRU.
- Taking an SRU course that is taught in whole or partially abroad.
- Completion of an approved credit internship (domestic or foreign).
- Completion of a pre-approved and documented international experience. Hours Supporting Courses (12 credits) which can be applied towards Liberal Studies.
Minor Area of Study:

All students are required to choose a minor area of study from the following list:

## College of Business, Information, and Social Science

Economics*, Finance*, Marketing*, Management*, Human Resource Management*, Accounting*, Communication*, Computer Science*, Information Systems*, Information Technology*, Political Science*, International Affairs, East Asian Studies

## College of Humanities, Fine and Performing Arts

Modern Languages and Cultures - French*, Spanish*, German, Russian, History*, American History, European History, Non-Western History; English, Writing, Philosphy

College of Health, Environment and Science
Mathematics*, Statistics, Geography*
*Student may choose a second major in these areas if desired

## Requirements for the Major - Credits: 57

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3 or MGMT 219
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
or ECON 219
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3
or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 15

- INBS 227 - Introduction to International Business Credits: 3
- INBS 326 - International Economics Credits: 3
- INBS 427 - International Financial Management Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 437 - International Marketing Credits: 3


## International Experience Requirement:

- Study abroad with credits transferred back to SRU.
- Taking an SRU course that is taught in whole or partially abroad.
- Completion of an approved credit internship (domestic or foreign).
- Completion of a pre-approved and documented international experience. Hours Supporting Courses ( 12 credits) which can be applied towards Liberal Studies.


## Minor Area of Study:

## All students are required to choose a minor area of study from the following list:

College of Business, Information, and Social Science
Economics*, Finance*, Marketing*, Management*, Human Resource Management*, Accounting*, Communication*, Computer Science*, Information Systems*, Information Technology*, Political Science*, International Affairs, East Asian Studies

College of Humanities, Fine and Performing Arts
Modern Languages and Cultures - French*, Spanish*, German, Russian, History*, American History, European History, Non-Western History; English, Writing, Philosphy

College of Health, Environment and Science
Mathematics*, Statistics, Geography*
*Student may choose a second major in these areas if desired

## Degree Completion in Four Years International Business <br> (BSBA)

## Completion Hours: 120

## Freshman Year - Total Hours: 32

- Math Requirement - Credits: 3
- Liberal Studies - Credits: 12
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- INBS 227 - Introduction to International Business Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1 and Activity

Sophomore Year - Total Hours: 30

- INBS Elective - Credits: 3
- Liberal Studies - Credits: 3
- ACCT 209 - Fundamental Accounting I Credits: 3
- COMM 200 - Public Speaking Credits: 3
- COMM 217 - Intercultural Communication Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- POLS 263 - Introduction to Comparative Politics Credits: 3

Junior Year - Total Hours: 28

- INBS Elective - Credits: 3
- Liberal Studies - Credits: 4
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- INBS 326 - International Economics Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Senior Year - Total Hours: 30

- Minor - Credits: 9
- Liberal Studies - Credits: 9
- INBS 427 - International Financial Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3


## International Initiatives

Director<br>Donald E. Kerchis

## Coordinator for International Admissions

Pamela Frigot
International Student Advisor
Kelly Slogar
Secretaries
Denise Barger, Brenda McKissick

## International Student Services

To promote multi-cultural awareness, the university actively seeks international students. In recognition of their unique needs, the office of international initiatives admits international students, providing support services, such as orientation to the United States and Slippery Rock University; immigration information and assistance (processing work for visa and passport renewal, extensions of stay, work permits, etc.); support for the Internations Club; registration; counseling and personal adjustment problems; and community liaison services.

## Study Abroad Opportunities

Slippery Rock University provides students with a global understanding of the world so that they may gain the international understanding necessary to be informed citizens. The university encourages its students to explore the appropriateness of studying abroad. This can be an integral part of the students' university experience, providing personal growth, cultural understanding and job opportunities.

Study abroad programs are conducted during the academic year, summer, and during winter vacation. Over 250 students annually study overseas. The following represents the current study abroad opportunities with which Slippery Rock University is formally associated.

Australia (Melbourne) - Established in 2001, students can earn 12-15 credits studying at Victoria University.

Austria (Vienna) - This popular overseas program is located in beautiful Vienna, Austria, where students can earn 12-15 credits each semester. Emphasis is on German language, and culture, and music.

Bulgaria (Blagoevrad) - Established in 1992 with the American University in Bulgaria. Students may earn 12-15 credits per semester.

China (Nanjing) - Established in 2001 with Nanjing University. Students can earn 12-15 credits per semester in Chinese language, history, and culture. (A minimum of one semester of Chinese is required.)

Costa Rica (San Jose) - Students can earn 12-15 credits per semester studying at the University of Costa Rica.

England (Middlesburgh) - Established in 1991 with Teesside University. Students majoring in business and liberal arts may earn 12-15 credits per semester.

France (Cannes) - Students can earn 12-15 credits per semester studying at The College Internationale de Cannes. Emphasis is on French language, culture, history and business.

Germany - Since 1982 students fluent in German may study at 1 of 12 German universities earning 12-15 credits per semester in their major and German.

Hungary (Budapest) - Established in 1989 with the Semmelweiss University, physical education students can earn 12-15 credits during the spring semester.

Ireland (Dublin) - Education majors student teaching in the fall semester can teach in selected Irish public schools and live with Irish host families.

Ireland (Limerick) - Students can spend the fall semester at the University of Limerick where they can earn 12-15 credits in liberal arts, physical education, and business.

Japan (Osaka) - Kansai Gaidai University and Slippery Rock University have exchanged students since 1979. Students can earn 12-15 credits per semester in Japanese language, business, social sciences, and humanities (a minimum of one semester of Japanese is required).

Korea (Chuncheon) - Established in 1988 with Kangwon National University, students can earn 12-15 credits per semester emphasis is on Korean language and culture. (A minimum of one semester of Korean language is required.)

Mexico (Mexico City) - Established in 1996 with Iberoamericana University in Mexico students may earn 12-15 credits per semester.

Poland (Poznan) - Established in 1994 with the Academy of Fine Arts in Poznan. Students can earn 12-15 credits per semester in art.

Russia (Moscow) - Established in 1993 with the Pushkin Institute where students can earn 12-15 credits per semester. (A minimum of 1 semester of Russian is required; summer intensive Russian language classes are available).

Scotland (Edinburgh) - Established in 1991 with Queen Margaret College. Students majoring in communications may earn 12-15 credits per semester.

Slovakia (Bratislava) - Established in 1991 with Comenius University and the Academy of Fine Arts. Students majoring in liberal arts and art may earn 12-15 credits per semester.

Spain (Seville) - Every semester students can study in Seville at the Institute of International Studies, associated with the University of Seville, where they can earn 12-15 credits. Emphasis on Spanish language, culture, history and business.

Wales (Aberystwyth) - Established in 1997 with Aberystwyth University. Students can earn 12-15 credits per semester in all majors.

## International Business Internships

Every summer students may secure internship positions in England and Scotland for 10 weeks, earning up to 12 credits working for British companies, organizations or multinational corporations.

## Summer Programs

Summer courses are offered by Slippery Rock University professors at eight overseas centers. The programs vary from three to four weeks, and three-to-nine credit hours may be earned. Current summer programs are conducted in:

- Canada (Stratford, Ontario)
- Costa Rica (San Jose)
- England (London)
- France (Cannes)
- Ireland (Dublin)
- Spain
- Russia


## January/March Seminars

Selected courses will have an overseas component during January or March.

## Honors Cultural Seminar

During spring vacation selected honors students will be provided a cultural experience in an international setting.

Financial aid received by students may be applied to SRU sponsored programs. Special travel stipends are available to SRU students. The office of international initiatives also provides students with assistance in making travel arrangements, passport application, international student I.D., and international youth hostels.

## Management (BSBA)


#### Abstract

A student pursuing a bachelor of science in business administration degree can choose to major in management. The program of management offers the bachelor of science in business administration degree with a major in management. This program focuses on the process of working with and through others to achieve organizational objectives. Today's manager must effectively plan, organize, lead and make decisions in an increasingly complex, changing environment.

The management students learn to make decisions regarding production, personnel, and overall strategy within the organization, considering the need to be responsive to growing societal demands, international competition and the multicultural nature of today's work force. The program is relevant to students who plan to own, manage, or consult for any organization, large or small, public or private, profit or nonprofit. The management major in business administration is accredited by the Association of Collegiate Business Schools and Programs.


## Requirements for the Major - Credits: 60

Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3
or higher (excluding MATH 152, MATH 210 and MATH 214)


## Required Major Courses - Credits: 18

Three credits from any 300- or 400-level management course(s) except MGMT 450 and the following:

- MGMT 352 - Operations Management II Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 360 - Total Quality Management Credits: 3
- MGMT 454 - Management Seminar Credits: 3
- MGMT 457 - International Management Credits: 3


## Degree Completion in Four Years Management (BS/BA)

## Completion Hours: 120

Freshman Year - Total Hours: 32

- PESM Elective (2) - Credits: 2
- LS/Elective - Credits: 15
- Math Requirement - Credits: 3
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- LS/Elective - Credits: 6
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Junior Year - Total Hours: 30

- LS/Elective - Credits: 12
- ACCT 240 - Legal Environment or Business I Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 360 - Total Quality Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3


## Senior Year - Total Hours: 28

- Management Elective - Credits: 3
- LS/Elective - Credits: 13
- MGMT 352 - Operations Management II Credits: 3
- MGMT 454 - Management Seminar Credits: 3
- MGMT 457 - International Management Credits: 3
- MGMT 458 - Business Policy Credits: 3


## Marine Science

## Coordinators

Simon Beeching, Tamra Schiappa
Marine biology, marine ecology, marine geology and geophysics, chemical oceanography, and physical oceanography are career areas that are best approached through an undergraduate major in one of the basic sciences of biology, chemistry, geology or physics, or through mathematics. Slippery Rock University, through its membership in the Marine Science Consortium, offers students interested in ocean-related phenomena an opportunity to pursue that interest through a series of summer courses offered at the Wallops Island Marine Science Center, near the Atlantic Ocean in the Virginia eastern shore region. Four three-week summer sessions are offered.

Students interested in marine studies will pursue a major in one of the natural sciences or mathematics at SRU, augmenting their studies with summer courses at the Wallops Island Marine Science Center. The number of summer courses taken will depend on the students' interests and the majors they pursue on campus. Individual programs may be tailored in consultation with an advisor, and the Department of Biology offers a minor in Marine Biology.

The Marine Science Consortium pools the talents and resources of 16 colleges and universities in the mid-Atlantic States. Classrooms, wet and dry laboratories, computer room, a workshop, dock facilities, dormitories, apartments, a cafeteria and recreational facilities are available at or near the Wallops Island Station. Several research and training vessels are available for work along the Atlantic coast and the Chesapeake Bay. Some courses offered at the Marine Science Center may be applied to the liberal studies requirement in the natural sciences so that any Slippery Rock

University student, regardless of major, may take advantage of a first-hand experience in the marine environment. Advisement from one of the Slippery Rock University faculty members associated with the consortium is recommended for any student using Marine Science Consortium courses to fulfill the liberal studies requirement in science. Students should contact the Department of Geography, Geology, and the Environment or the Department of Biology for names of the advisors.

## Marketing (BSBA)

A student pursuing a bachelor of science in business administration degree can choose to major in marketing. The study of marketing involves the dynamic process by which persons and organizations strive to anticipate and satisfy consumers' needs and wants. In a free enterprise system, this is accomplished through marketing research, product planning, pricing, promotion, and distribution.

The marketing student develops an understanding of the concepts, functions and institutions of marketing, an appreciation of the consumer orientation, the skills to analyze and the ability to formulate marketing policies. The marketing major is particularly relevant to the student planning a career in sales, advertising, consumer relations, merchandising, brand management, marketing management, marketing research, retailing services, purchasing, business logistics, small business operations, executive management, consulting, business education, or employment in certain government agencies as well as many non-profit organizations. The marketing major in business administration is accredited by the Association of Collegiate Business Schools and Programs.

## Requirements for the Major - Credits: 60

## Required BSBA Core Courses - Credits: 36

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Other Required Courses - Credits: 6

- CPSC 210 - Productivity Software Credits: 3
- MATH 120 - Intermediate Algebra Credits: 3
or higher (excluding MATH 152, MATH 210 and MATH 214)
- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- MRKT 431 - Marketing Seminar Credits: 3
- MRKT 437 - International Marketing Credits: 3

Three Credits Selected From Any 300- and 400-Level Marketing Courses Except MRKT 450 Internship

## Degree Completion in Four Years Marketing (BSBA)

## Completion Hours: 120

Freshman Year - Total Hours: 32

- PESM Elective (2) - Credits: 2
- Math Requirement - Credits: 3
- Liberal Studies - Credits: 15
- CPSC 110 - Computer Concepts Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3

Sophomore Year - Total Hours: 30

- LS/Elective - Credits: 9
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3

Junior Year - Total Hours: 30

- LS/Elective - Credits: 9
- ACCT 240 - Legal Environment or Business I Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- MGMT 219 - Business Statistics Credits: 3
- MGMT 320 - Operations Management I Credits: 3
- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 430 - Marketing Research Credits: 3

Senior Year - Total Hours: 28

- Marketing Elective - Credits: 3
- LS/Elective - Credits: 13
- MGMT 365 - Management Information Systems Credits: 3
- MGMT 458 - Business Policy Credits: 3
- MRKT 431 - Marketing Seminar Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Mathematics (BA)

## College-Wide Requirements:

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4


## Requirements for the Major - Credits: 36

## Required Courses

A three-hour independent study thesis, and at least 6 credits of electives from mathematics courses 300 and above. In addition, candidates for the bachelor of arts degree must satisfactorily complete, either by placement or by coursework, the first three semesters of a foreign language.

- MATH 131 - Discrete Mathematics Credits: 3
(* see footnote)
- MATH 230 - Calculus II Credits: 4
(* see footnote)
- MATH 231 - Calculus III Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
(* see footnote)
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1


## Footnote

* Minimum grade of C required.


## Degree Completion in Four Years Mathematics (BA)

Completion Hours: 120
Freshman Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- GERM 101 - German Language and Culture I Credits: 3 Recommended
- GERM 102 - German Language and Culture II Credits: 0 Recommended
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3 Recommended

Sophomore Year - Total Hours: 30

- Liberal Studies/Electives - Credits: 11
- COMM 200 - Public Speaking Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3

Recommended

- GERM 103 - German Language and Culture III Credits: 0

Recommended

- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3


## Junior Year- Total Hours: 30

- MATH Electives - Credits: 6
- Liberal Studies/Electives - Credits:14
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1

Senior Year- Total Hours: 30

- Liberal Studies/Electives - Credits: 26
- MATH 490 - Independent Study Credits: 1 to 3
- MATH 491 - Mathematics Seminar Credits: 1 Recommended


## Residency Requirement for Mathematics Majors

To earn a Bachelor of Science or Bachelor of Arts degree in mathematics, all students must complete a minimum of 12 credit hours of mathematics courses at the 300 level or above at Slippery Rock University.

## Mathematics (BS)

## College-Wide Requirements:

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- PHYS 211 - General Physics I Credits: 4


## Requirements for the Major - Credits: 58

## Required Courses

Competency in an approved computer language, and at least 12 additional hours selected from approved mathematics courses numbered above 300. The program must include one of the following sequences: $325-326 ; 307-308 ; 301-302 ; 320-325 ; 335-311 ; 309-315$.

In addition, the requirements in one of several special interest areas, ranging from 14 to 16 hours, must be completed or the student has the option of taking a minor if available in the area of special interest. The special interest areas are Actuarial Science, Biology, Chemistry, Community Health, Computer Science, Economics, Finance, Geology, Mathematics Graduate School, Philosophy, Physics, Pre-masters of Business Administration, Secondary Education, Psychology, Sociology, and Statistics.

Hours in special interst areas may be included among the required liberal studies courses.
Students must complete Math 131, 225, 230, and 235 with a grade of at least C before being allowed to register for upper division courses.

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 325 - Abstract Algebra I Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1 (two one-hour seminar courses)


## Footnote

* Minimum grade of C required.


## Degree Completion in Four Years Mathematics (BS)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 7
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3

Recommended
Sophomore Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 14
- COMM 200 - Public Speaking Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 309 - Linear Algebra Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies/Special Interest - Credits: 14
- Electives - Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 325 - Abstract Algebra I Credits: 3
- MATH 491 - Mathematics Seminar Credits: 1

Senior Year - Total Hours: 30

- MATH Electives - Credits: 12
- Liberal Studies/Special Interest - Credits: 17
- MATH 491 - Mathematics Seminar Credits: 1


## Residency Requirement for Mathematics Majors

To earn a Bachelor of Science or Bachelor of Arts degree in mathematics, all students must complete a minimum of 12 credit hours of mathematics courses at the 300 level or above at Slippery Rock University.

Slippery Rock University's medical technology program involves three academic years of study on campus and one calendar year at an approved, affiliated school of medical technology or one acceptable to SRU. During the first three years of the program the student must complete a minimum of 91 semester credits.

After the sophomore year, the student applies for admission to a school of medical technology where acceptance is on a competitive basis. Successful completion of the internship program results in the awarding of the bachelor of science degree. Certification as a medical technologist is obtained by passing the Board of Registry Medical Technologists examination of the American Society of Clinical Pathologists and/or the Clinical Laboratory Scientist examination of the National Certification Agency for Medical Laboratory Personnel. Because of the nature of the medical technology curriculum, transfer students are strongly urged to earn 64 credits at Slippery Rock University.

Note: A 2.000 average must be maintained in BIOL 104, 210, 213, 214, 215, 216, 217 and 250 before medical technology students can move on to the next required course. See also Department of Biology guidelines for further restrictions.

## Requirements for the Major - Credits: 50

## Required Courses

## Biology Courses - Credits: 26

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 210 - Medical Microbiology Credits: 3
- BIOL 213 - Medical Immunology Credits: 1
- BIOL 214 - Medical Parasitology Credits: 1
- BIOL 215 - Medical Mycology Credits: 1
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 335 - Cell Biology Credits: 3
or
- BIOL 370 - Molecular Biology Credits: 3

Chemistry Courses - Credits: 16

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1

Mathematics Courses - Credits: 4

## Physics Courses - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Minor and Certificate in Health Care Informatics

## Coordinator

Ramona Nelson

Health Care Informatics is focused on the development and application of information technology to health care information. It is an interdisciplinary program integrating health care computer and information science. Health care informatics specialists are professionals who assume direct responsibility for automated information systems within a health care context acting as a liaison between health care and computer specialists.

The Health Care Informatics program is offered in three tracts. Tract I is designed for students who are interested in health care and computers but do not have a degree in either area. Tract II is a fast tract for students with a major or degree in one of the health care fields. Tract III is a fast tract designed for students with a major or degree in computer science/information systems. Each of the three tracts is offered as an undergraduate minor or as a certificate. The certificate option is available for post-baccalaureate students who have already completed a bachelor's degree.

Healthcare informatics students will be provided advisement related to the minor or certificate program by Ramona Nelson, nursing department, or Sharadchandra Joshi, computer science department.

## Required of All Students:

All students in each tract are required to take two courses in health care informatics (NURS 311, 511) and complete a 3-credit practicum or internship capstone experience (NURS 450). In addition students must complete the requirements for their specific tract.

- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 450 - Health Care Informatics Internship Credits: 3
- NURS 511 - Advanced Healthcare Informatics Credits: 3


## Requirements for Students in Tract I

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
or
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- HSA 231 - The US Healthcare System Credits: 3
- HSA 335 - Current Topics in Health Care Credits: 3

A Computer Science Elective Course

Select one of the following:

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 305 - Introduction to Expert Systems Credits: 3
- CPSC 413 - Systems Analysis Credits: 3


## A Health Related Elective Course

Select one of the following:

- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 422 - Nursing Research Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Requirements for Students in Tract II

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
or
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- CPSC 323 - Data Base Systems Credits: 3


## Elective Course

Select one of the following:

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 305 - Introduction to Expert Systems Credits: 3
- CPSC 413 - Systems Analysis Credits: 3


## Requirements for Students in Tract III

- AHEA 111
- AHEA 231
- HSA 335 - Current Topics in Health Care Credits: 3


## Elective Course

Select one of the following:

- HSAF 210 - Introduction to Community Health Credits: 3
- HSAF 311 - International Health Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 422 - Nursing Research Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Minor in Accounting

## Required BSBA Core Courses - Credits: 36

- ACCT 309- Cost Accounting I Credits: 3
- ACCT 313 - Intermediate Accounting I Credits: 3
- ACCT 314 - Intermediate Accounting II Credits: 3


## And One of the Following Courses:

- ACCT 230 - Accounting Information Systems Credits: 3
- ACCT 308 - Federal Individual Income Tax Credits: 3
- ACCT 310 - Cost Accounting II Credits: 3
- ACCT 411 - Auditing Theory and Practice Credits: 3


# Minor in Adapted Physical Activity 


#### Abstract

"I cannot imagine the last four years of my life without the incredible experiences of this minor. Not only was it an incredible learning experience; but it was an unforgettable experience of what it means to touch peoples' lives and be touched back in the best possible way and that is through the heart."


#### Abstract

Marla Aron '02 The Adapted Physical Activity program is a minor designed to prepare students in exercise science, teacher education, therapeutic recreation, and athletic training programs to assess, develop, implement, and evaluate programs of physical education and fitness exercise for individuals with disabilities. The Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) are two federal laws that provide access and education to all walks of life for people with disabilities. This will result in an increase of participation and subsequent knowledge for planning appropriate programs for individuals with disabilities.

Employers in school districts, fitness agencies, and sport organizations are actively recruiting individuals with experience working with people with disabilities. Graduates of the program have been extremely successful securing jobs in their chosen fields or receiving acceptance into graduate programs in adapted physical activity, physical therapy, or other related professions.


Students will acquire knowledge and skills through a comprehensive program of class and practical experiences in this 27 -credit program. Students can also take advantage of participating in state and national conferences, developing grant writing skills and supervisory roles in one or more of the community service-learning practical programs.

## Requirements for the Minor in Adapted Physical Activity and Rehabilitation

Theory Core Courses - Credits: 27

- ERS 165 - Introduction to Equine Facilitated Riding Credits: 3
- ERS 261 - Adapted Aquatics Credits: 3
- ERS 265 - Sport and Disability Credits: 3
- ERS 275 - Introduction to Adapted Physical Activity Credits: 3
- ERS 285 - Adapted and Therapeutic Exercise Credits: 3
- ERS 358 - Assessment Techniques in Adapted Physical Activity Credits: 3
- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 465 - Program Design in Adapted Physical Activity Credits: 3
- ERS 466 - Professional Affiliation in Adapted Physical Activity Credits: 3


## Minor in American Politics

## Requirements for the Minor - Credits: 18

At least nine (9) of the required eighteen (18) hours must be at the 300 level or above.
A minimum of eighteen credits from the following:

- POLS 201
- POLS 101 - American National Government Credits: 3
- POLS 200 - State and Local Government Credits: 3
- POLS 224 - Civil Liberties Credits: 3
- POLS 321 - The Presidency Credits: 3
- POLS 323 - The Courts Credits: 3
- POLS 325 - The Congress Credits: 3
- POLS 327 - Public Opinion and Political Attitudes Credits: 3
- POLS 360 - Parties and Elections Credits: 3
- POLS 375 - Women and Politics Credits: 3
- POLS 403 - Constitutional Law Credits: 3


## Minor in Anthropology

## Requirements for the Minor in Anthropology - Credits: 18

- SASW 202 - Introduction to Anthropology Credits: 3
- SASW 211 - Physical Anthropology Credits: 3
- SASW 212 - Archaeology/World Prehistory Credits: 3
- SASW 320 - Anthropology Methods Credits: 3
- SASW 401 - Applied Anthropology Credits: 3

And One of the Following:

- G\&ES 303-Asia Credits: 3
- G\&ES 308 - Europe Credits: 3
- G\&ES 309 - Africa Credits: 3


## Minor in Art

## Requirements for the Minor in Art - Credits: 21

## 3 Credits Selected From:

- ART 105 - Basic Studio Drawing Credits: 3
- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 3 Credits Selected From:

- ART 109 - Basic Studio Metalsmithing Credits: 3
- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3


## 3 Credits Selected From:

- ART 225 - Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3
- ART 325 - North American Art History Credits: 3
- ART 335 - The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3
- ART 420 - Art History Seminar Credits: 3

6 Credits Selected From:

- ART 205 - Art Synthesis Drawing Credits: 3
- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3
- ART 213 - Art Synthesis Design Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3

6 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3
- ART 314 - Advanced Studio Digital Media Credits: 3


## Minor in Art for Elementary Education Majors

## Requirements for the Minor - Credits: 21

## Required Courses

- ART 105 - Basic Studio Drawing Credits: 3
- ART 225 - Overview of Western Art Credits: 3
- ART 317 - Advanced Topics in Elementary Art Credits: 3


## 3 Credits Selected From:

- ART 106 - Basic Studio Painting Credits: 3
- ART 107 - Basic Studio Photography Credits: 3
- ART 108 - Basic Studio Printmaking Credits: 3
- ART 114 - Basic Studio Digital Media Credits: 3


## 3 Credits Selected From:

- ART 110 - Basic Studio Sculpture Credits: 3
- ART 111 - Basic Studio Fibers Credits: 3
- ART 112 - Basic Studio Ceramics Credits: 3


## 3 Credits Selected From:

- ART 205 - Art Synthesis Drawing Credits: 3
- ART 206 - Art Synthesis Painting Credits: 3
- ART 207 - Art Synthesis Photography Credits: 3
- ART 208 - Art Synthesis Printmaking Credits: 3
- ART 209 - Art Synthesis Metalsmithing Credits: 3
- ART 210 - Art Synthesis Sculpture Credits: 3
- ART 211 - Art Synthesis Fibers Credits: 3
- ART 212 - Art Synthesis Ceramics Credits: 3

3 Credits Selected From:

- ART 305 - Advanced Studio Drawing Credits: 3
- ART 306 - Advanced Studio Painting Credits: 3
- ART 307 - Advanced Studio Photography Credits: 3
- ART 308 - Advanced Studio Printmaking Credits: 3
- ART 309 - Advanced Studio Metalsmithing Credits: 3
- ART 310 - Advanced Studio Sculpture Credits: 3
- ART 311 - Advanced Studio Fibers Credits: 3
- ART 312 - Advanced Studio Ceramics Credits: 3
- ART 313 - Advanced Studio Design Credits: 3


## Minor in Art History

## Requirements for the Minor - Credits: 21

## Required Courses

- ART 225 - Overview of Western Art Credits: 3
- ART 226 - Overview of World Art Credits: 3


## Elective Courses

9 credits selected from:

- ART 325 - North American Art History Credits: 3
- ART 335 - The Renaissance Tradition Credits: 3
- ART 345 - Foundations of Modern Art Credits: 3
- ART 355 - Early Modern Art Credits: 3
- ART 365 - Art Since 1945 Credits: 3


## Minor in Biology

## Requirements for the Minor - Minimum Credits: 17

Required Courses - Credits: 12

One 100-level course with lab. Two of the following courses:

- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4

Elective Courses - Credits: 5

Minimum of 5 credits selected from approved courses numbered 300 or above. Additional electives may be selected from the Marine Science offerings.

## Minor in Chemistry

## Requirements for the Minor

## Required Courses

## Option A:

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 475 - Advanced Organic Synthesis Credits: 5


## Option B:

- CHEM 225
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 302 - Physical Chemistry II Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 322 - Physical Chemistry Laboratory II Credits: 1


## Minor in Communication

Internship: only 3 credits may be counted toward the minor.
Students interested in a communication minor will have an advisor from their major department, but they are encouraged to seek assistance in choosing the appropriate communication courses from a faculty member in the Department of Communication.

Students must have a minimum 2.5 QPA overall.

Students may transfer up to 9 communication credits from other institutions. Transfer students must earn at least 3 credits at the 300 level and 3 credits at the 400 level at Slippery Rock University.

## Requirements for a Minor in Communication - Credits: 21

Students planning to minor in communication are required to take 21 credits of communication coursework, excluding COMM 200.

Required Core

- COMM 110 - Communication Concepts Credits: 3
- COMM 310-Communication Research Methods Credits: 3
- COMM 410 - Communication Law Credits: 3

In Place of COMM 310, Students May Substitute One of the Following Courses:

- HIST 205 - Historians Craft Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- POLS 310 - Research Methods Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 318 - Research Methods Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SPMT 599 - Sport Management Research Management Credits: 3

Electives - Credits: 12

Three must be at the 300/400 level, and three must be at the 400 level.

## Footnote

* In place of COMM 310, students may substitute one of the following courses:
- HIST 205 - Historians Craft Credits: 3
- HSAF 406 - Health Measurement and Evaluation Credits: 3
- MRKT 430 - Marketing Research Credits: 3
- POLS 310 - Research Methods Credits: 3
- PSYC 221 - Research Methods and Statistical Applications I Credits: 3
- SASW 318 - Research Methods Credits: 3
- SEFE 270 - Educational Measurements, Assessment and Evaluation Credits: 3
- SPMT 599 - Sport Management Research Management Credits: 3


## Internship:

Only 3 credits may be counted toward the minor.

## Minor in Community Service and Service-Learning

The minor in community service and service learning is intended to be useful to those students who may choose to follow either a career path or a personal goal of working within a non-profit, nongovernmental organizational context. These courses prepare students to meet the three criteria for service learning experiences: training for, participating in, and evaluating meaningful public service opportunities.

## Core Courses - Credits: 18

Note: For students who are interested in pre-law advisement please refer to the Program in Pre-law section.

- POLS 101 - American National Government Credits: 3
- POLS 151 - Introduction to Public Administration Credits: 3
- POLS 232 - Nonprofit Management Credits: 3
- POLS 255 - Introduction to Public Policy Credits: 3
- POLS 305 - Ethical Practice in Public Administration Credits: 3
- POLS 455 - The Politics of National Service and Civil Society Credits: 3


## Minor in Comparative Politics/International Relations

The minor requires the completion of a minimum of eighteen (18) credit hours which must be taken from the following:

Requirements for the Minor - Credits: 18
Three courses from Comparative Politics:

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3

Three courses from International Relations and Politics:

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Minor in Computer Science

For transfer students to earn a minor in computer science, the required course work for the minor must include a minimum of four computer science courses ( 12 credits) at the 200 level or above, at least two of which must be at the 400 level and completed at Slippery Rock University.

Requirements for the Minor in Computer Science - Credits: 25

Minor in computer science requires a minimum 2.000 quality point average in computer science courses completed at Slippery Rock University to fulfill course requirements of the minor.

## Required Courses

- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 370 - Assembly Language and Machine Organization Credits: 3
- CPSC 374 - Algorithms and Data Structures Credits: 3
- CPSC 376 - Programming Languages Credits: 3


## One Course (3 Credits) from the Following:

- CPSC 236 - Selected Computer Languages Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 378 - Theory of Computation Credits: 3
- CPSC 450 - Internship Credits: 3 to 12

Maximum of three credits in CPSC 450 permitted.

- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## Two Courses (6 Credits) from the Following (not chosen above):

- CPSC 450 - Internship Credits: 3 to 12
- CPSC 456 - Introduction to Computer Graphics Credits: 3
- CPSC 464 - Principles of Concurrent Programming and Operating Systems Credits: 3
- CPSC 466 - Compiler Design and Implementation Credits: 3
- CPSC 474 - Computer Architecture Credits: 3
- CPSC 476 - Artifical Intelligence Credits: 3
- CPSC 478 - Analysis of Algorithms Credits: 3
- CPSC 488 - Software Engineering Credits: 3
- CPSC 498 - Selected Topics Credits: 1 to 3


## A Minimum of Two Courses

must be numbered 450 or above. These two upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

## Minor in Criminology

## Requirements for the Minor - Credits: 21

Required Courses - Credits: 18

- SASW 201 - Principles of Sociology Credits: 3
- SASW 273 - American Corrections Credits: 3
- SASW 323 - Deviant Behavior Credits: 3
- SASW 333 - Crime, Justice and Society Credits: 3
- SASW 345 - Juvenile Delinquency Credits: 3
- SASW 414 - Law and Social Policy Credits: 3


## Electives

(One of the following courses):

- PHIL 335 - Philosophy of Law and Justice Credits: 3
- POLS 202 - Politics of Law Enforcement Credits: 3
- POLS 323 - The Courts Credits: 3
- PSYC 321 - Drugs and Behavior Credits: 3
or PSYC 202 Psychology of Criminal Behavior - Credits: 3


## Minor in Dance

## Requirements for the Minor - Credits: 24

## Required Courses

Level I technique classes in Modern Dance, Ballet and Jazz may be required of some Dance Minors and can be included in the SRU Liberal Studies requirement.

- DANC 100 - Introduction to Dance Credits: 3
- DANC 101 - Wellness for Dancers Credits: 1
- DANC 105 - Dance Fundamentals Credits: 1
- DANC 200 - Dance Composition Credits: 3
- DANC 220 - Modern Dance II Credits: 2 (* see footnote)
- DANC 221 - Ballet II Credits: 2 (* see footnote)
- DANC 222 - Jazz Dance II Credits: 2 (* see footnote)
- DANC 223 - Introduction to Creative Dance Credits: 1
- DANC 224 - Improvisation Credits: 2
- DANC 323 - Teaching of Dance Credits: 3 DANC 350 - Field Experience
- DANC 326 - Dance Kinesiology Credits: 3
- DANC 350 - Field Experience Credits: 1

DANC 323 - Teaching of Dance

## Footnote

* All dance minors are required to demonstrate Level II proficiency in Modern Dance, Ballet and Jazz technique.


## Electives

Recommended coursework to enhance the Dance Minor:

- DANC 112 - Tap Dance I Credits: 1
- DANC 199 - LMA/Performance Techniques Credits: 1
- DANC 216 - Principles of Dance Production Credits: 3
- DANC 318 - Dance History I: Primitive to the Nineteenth Centruy Credits: 3
- DANC 324 - Music for Dance Credits: 3
- DANC 399 - Repertory Credits: 1
- DANC 400 - Dance Composition III Credits: 3
- THEA 131 - Fundamentals of Acting Credits: 3 and all dance technique courses.


## Minor in East Asian Studies

Coordinator<br>George Brown

## Faculty

Nora Ambrosio, George Brown, Margaret Denning, Alison McNeal, J. Sunita Peacock, Rachela Permenter, Carolyn Prorok, David Skeele

The interdisciplinary East Asian Studies minor offers students the opportunity to gain a working knowledge of the countries that share the Pacific Ocean with the United States. East Asian countries are those modern cultures which draw their most prominent characteristics from ancient China, which has the oldest surviving civilization in the world. Japan, the Koreas, Vietnam, and China are the major "East Asian" nations today, but there are significant populations in other parts of the world of people whose traditions are East Asian (Indonesia and Malaysia being important examples). Over one quarter of the people residing on the globe live in the area called East Asia, which contains the most rapidly industrializing and fastest growing economies in the world.

The East Asian Studies minor provides a valuable focus for majors in many fields. Business majors will find a minor in East Asian Studies particularly attractive to future employers who are already doing business in the region or who wish to begin trade there. Future teachers and social workers as well as health and fitness professionals will find the background useful in their work with the increasing Asian population in the United States (Asians and Pacific Islanders are the fastest growing minority in America). Students with majors in the humanities and social sciences will find the minor a valuable balance to the largely Western content and methodologies that characterize their fields of study.

Students may chose between two tracks in the minor. One track requires no competency in an East Asian language and the other track is for those who want to demonstrate proficiency in either Chinese, Japanese, or Korean.

## Requirements for the Minor

## Without a Language Requirement - Credits: 18

No more than three credits may be in languages and at least two courses must be at or above the 300 level.

- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- G\&ES 303-Asia Credits: 3
- HIST 286 - Modern Japan Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3


## And

- CHIN 101 - Chinese Language and Culture I Credits: 3
- CHIN 102 - Chinese Language and Culture II Credits: 0
- CHIN 103 - Chinese Language and Culture III Credits: 0
- CHIN 202 - Intermediate Chinese I Credits: 3


## Or

- KORN 101 - Korean Language and Culture I Credits: 3
- KORN 102 - Korean Language and Culture II Credits: 3
- KORN 103 - Korean Language and Culture III Credits: 3
- KORN 202 - Intermediate Korean I Credits: 3

Or

- JAPN 101 - Japanese language Culture I Credits: 3
- JAPN 102 - Japanese language Culture II Credits: 3
- JAPN 103 - Japanese language Culture III Credits: 3
- JAPN 202 - Intermediate Japanese I Credits: 3


## With a Language Requirement - Credits: 21

Students must attain at least third semester proficiency in either Chinese, Japanese, or Korean. At least three courses must be non-language courses. At least two of these courses must be at or above the 300 level.

- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- G\&ES 303-Asia Credits: 3
- HIST 286 - Modern Japan Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- PHIL 343 - Oriental Religious and Philosophical Thought Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3

And

- CHIN 101 - Chinese Language and Culture I Credits: 3
- CHIN 102 - Chinese Language and Culture II Credits: 0
- CHIN 103 - Chinese Language and Culture III Credits: 0
- CHIN 202 - Intermediate Chinese I Credits: 3

Or

- KORN 101 - Korean Language and Culture I Credits: 3
- KORN 102 - Korean Language and Culture II Credits: 3
- KORN 103 - Korean Language and Culture III Credits: 3
- KORN 202 - Intermediate Korean I Credits: 3

Or

- JAPN 101 - Japanese language Culture I Credits: 3
- JAPN 102 - Japanese language Culture II Credits: 3
- JAPN 103 - Japanese language Culture III Credits: 3
- JAPN 202 - Intermediate Japanese I Credits: 3


## Minor in Economics

Students pursuing a minor in economics must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required BSBA Core Courses - Credits: 36

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## And Two 300 or 400 Level Economics Courses

## Minor in Economics (non-BSBA)

Students pursuing a minor in economics must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Required Courses - Credits: 15

- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3

Specified Electives - Credits: 6

Two additional economic elective courses (200 level or above).

## Minor in Elementary School Mathematics

## Requirements for the Minor

- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- MATH 118 - Elementary Geometry Credits: 3
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 310 - Elementary Mathematics II Credits: 3

And at Least Three Additional Courses from:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 131 - Discrete Mathematics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Environmental Science

## Requirements for the Minor

## Required Courses - Credits: 24

Of the required and elective courses listed, no more than six credit hours may be counted toward both the environmental science minor and a major.

## Environmental Science Core - Credits: 9

- BIOL 100 - Introductory Biology Laboratory Credits: 1
- BIOL 101 - General Biology Credits: 3
- EGEO 121 - Meteorology Credits: 3

Elective Courses - Credits: 15

At least six credits are to be at the 300 or higher level

- BIOL 305 - Aquatic Plants Credits: 3
- BIOL 306 - Freshwater Biomonitoring Credits: 3
- BIOL 401 - Ecology Credits: 3
- CHEM 200 - Fundamentals of Organic Chemistry Credits: 3
- CHEM 240 - Industrial Hygiene Credits: 3
- CHEM 270 - Industrial Chemistry Credits: 3
- CHEM 370 - Water Quality Assessment Credits: 4
- CHEM 430 - Industrial Pollution Control Engineering Credits: 3
- EGEO 201 - Earth Materials Credits: 3
- EGEO 231 - Aerial Photography Interpretation Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3
- EGEO 448 - X-ray Spectrometry Credits: 3
- EGEO 451 - Geochemistry Credits: 4
- EGEO 453 - Geotechniques: Geochemistry Credits: 1
- EGEO 460 - Hydrogeology Credits: 3
- EGEO 476 - Geotechniques: Geophysics Credits: 1
- G\&ES 324 - Environmental Law and Policy Credits: 3


## Minor in Exceptionalities

## Requirements for the Minor

Students who are studying in psychology, social work, music therapy, recreation, and teacher education may find the minor in exceptionalities to be a desirable enhancement to their major career fields. The minor is a prescribed program of 15 credits of special education courses. The Minor in Exceptionalities program does not lead to certification in special education.

Level I

One course required

- SPED 100 - Introduction to Special Education Credits: 3


## Level II

Select two courses

- SPED 203 - Educational Aspects of ED/LD Credits: 3
- SPED 204 - Educational Aspects of the Mental Retardation Credits: 3


## Level III

Two courses required

- SPED 312 - Educational Strategies for Learners with Mild Disabilities Credits: 3
- SPED 313-Classroom Management Strategies Credits: 3


## Minor in Finance

Students pursuing a minor in finance must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 36

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3
- FIN 328 - Long TermFinancial Management Credits: 3


# Minor in Finance (Non-Business majors and NonInformation Science-Finance majors) 

## Requirements for the Minor

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 210 - Fundamental Accounting II Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3
- FIN 320 - Managerial Finance Credits: 3
- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 327 - Management of Working Capital Credits: 3


## Minor in Finance for International Business (BSBA)

Students pursuing a minor in international business must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 36

- FIN 321 - Investments Credits: 3
- FIN 323 - Financial Markets and Institutions Credits: 3
- FIN 427 - International Financial Management Credits: 3

And One Finance Course 300- or 400-Level Or:

- ECON 301 - Macroeconomic Analysis Credits: 3
- ECON 302 - Microeconomic Analysis Credits: 3


## Minor in French

Requirements for the Minor - Credits: 18

Eighteen credits of French courses above the 101 level, including a minimum of two 300-level courses.

## Minor in General Sociology

## Requirements for the Minor - Credits: 18

Core Courses - Credits: 9

- SASW 201 - Principles of Sociology Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3

Electives - Credits: 9

Three Approved Courses from Among Sociology Offerings.

## Minor in Geographic Information Technology

Requirements for the Minor
Required Courses - Credits: 21

- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
(* see footnote)
- G\&ES 325 - Introduction to Geographic Information Systems Credits: 3 (* see footnote)
- G\&ES 410 - Remote Sensing Credits: 3
- G\&ES 415 - Cartography II Credits: 3
(* see footnote)
- G\&ES 425 - Advanced Geographic Information Systems Credits: 3
(* see footnote)
- G\&ES 450 - Internship Credits: Variable

Footnote
*Check prerequisite

## Minor in Geography

Requirements for the Minor
Required Courses - Credits: 21
Group I: (Select 6 Credits)

- G\&ES 150 - The Natural Environment Credits: 3
- G\&ES 302 - Cultural Geography Credits: 3
- G\&ES 331 - Economic Geography Credits: 3


## Group II: (Select 3 Credits)

- G\&ES 202 - United States and Canada Credits: 3
- G\&ES 301 - Geography of Rural Areas Credits: 3


## Group III: (Select 3 Credits)

- G\&ES 220 - General Methods of Fieldwork Credits: 3
- G\&ES 315 - Cartography I Credits: 3
- G\&ES 410 - Remote Sensing Credits: 3

Electives: - Credits: 9

Any three G\&ES courses at the 200 level or above.

## Minor in Geology

## Requirements for the Minor

Electives should be chosen only after consultation with the academic advisor. No more than six semester credits may count toward both a major and the geology minor.

## Required Courses - Credits: 19

Geology Core - Credits: 10

- EGEO 101 - Physical Geology Credits: 3
- EGEO 102 - Historical Geology Credits: 3
- EGEO 111 - Physical Geology Lab Credits: 1
- EGEO 112 - Historical Geology Lab Credits: 1
- EGEO 271 - Geotechniques: Lab Credits: 2

Geology electives - Credits: 9 minimum

- a. At least three credits of geology courses at a level of 200 or higher.
- b. At least six credits of geology courses at a level of 300 or higher.


## Minor in German

## Requirements for the Minor - Credits: 18

Two courses at the 300 level and the following:

- GERM 102 - German Language and Culture II Credits: 0
- GERM 103 - German Language and Culture III Credits: 0
- GERM 201 - Communication in German Credits: 3
- GERM 210 - German Literature in Translation Credits: 3


## Minor in Gerontology


#### Abstract

Coordinator Adelle Williams "My experience with the SRU gerontology program fostered my interest in aging. The education was the key that unlocked the door to my career in gerontology."


## Michelle Zanicky Jamieson <br> December, 1992

Gerontology is an interdisciplinary specialization that focuses on aging and the aging process. This specialization is designed to enhance the understanding of aging and enrich interactions among generations. It is a valuable adjunct for those preparing to work directly with, or indirectly for, older persons. Job opportunities for students who have academic preparation in gerontology are available in community agencies servicing the older adult, long term care facilities and hospitals, senior citizen living facilities, and community recreation and senior centers. The program is open to students in any major. Students may decide to complete the requirements for a certificate in gerontology or a gerontology minor.

The Student Gerontological Society provides students with opportunities to participate in the annual campus-wide Health Fest in October, community outreach activities, and program marketing as well as attend national and regional conferences. Sigma Phi Omega, the national honorary society in gerontology, recognizes students' exemplary scholastic accomplishments in the field of aging. Undergraduate students with a QPA of 3.300 or above (on a 4.000 scale) are eligible to apply.

## Advisement

Students planning to complete the program in gerontology will declare a major within a department. Major responsibility for advisement will rest within this department. Students must assume responsibility for fulfilling all requirements for graduation.

## Requirements for the Minor

Students must take a total of five 3-credit courses as well as a 3-credit internship related to major area of interest and involving the elderly unless they have taken such an internship in their major. Of the five required courses, one must be Aging and the Older Person (GERO 265), at least one course from the list of approved gerontology courses in the health science area, and one course from the psychological/sociological area.

To enter the gerontology program, students must submit an application form requiring the advisor's signature. A quality point average of 2.500 is required at the end of the semester prior to internship. Students are to notify the gerontology office when they have completed all of the requirements.

## Courses Approved for Gerontology:

- ERS 363 - Biomechanics of Special Populations Credits: 3
- ERS 476 - Physiological Aspects of Aging and Human Performance Credits: 3
- GERO 265 - Aging and the Older Person Credits: 3
- GERO 425 - Women and Aging Credits: 3
- GERO 450 - Gerontology Internship Credits: 3 to 12
- GERO 465 - Seminar in Gerontology Credits: 3
- GERO 490 - Independent Study Credits: 1 to 3
- HSAF 314 - Nutrition and Health Credits: 3
- HSAF 414 - Death and Dying Credits: 3
- NURS 498 - Selected Topics Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PSYC 365 - Psychology of Aging Credits: 3
- SASW 342 - Sociology of Aging Credits: 3


## Minor in History

## Requirements for the Minor - Credits: 18

Students must successfully complete 18 credits in one of the following minors:

## American History:

## 6 Credits from the Following

- HIST 201 - Colonial America to 1825 Credits: 3
- HIST 202 - United States, 1825-1900 Credits: 3
- HIST 203 - U.S. History Since 1900 Credits: 3


## 9 Credits from the Following

- 6 credits must be 300 level or above;
- A 3 credit free elective in history.
- HIST 233 - African American History to 1876 Credits: 3
or
- HIST 234 - African American History Since 1876 Credits: 3
- HIST 237 - Outstanding Americans Credits: 3
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 337 - Indians of the United States Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 344 - The American City Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 351 - Latin America to 1830 Credits: 3
or
- HIST 352 - Latin America Since 1830 Credits: 3
- HIST 357 - Challenges of the American Experience I (to 1865) Credits: 3
- HIST 358 - Challenges of the American Experience II (1865 to the e Present) Credits: 3
- HIST 435 - Pennsylvania Credits: 3
- HIST 437 - Westward Movement Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HIST 445 - Environmental Thought in the United States Credits: 3
- HIST 451 - U.S. Foreign Relations to 1890 Credits: 3
or
- HIST 452 - U.S. Foreign Relations Since 1890 Credits: 3
- HIST 453 - American Constitutional History and Law Credits: 3
- HIST 455 - Economic U.S. History Credits: 3


## European History:

## 6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the Modern World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3


## 9 Credits from the Following

- A 3 credit free elective in history.
- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 305 - Russia to 1855 Credits: 3
- HIST 306 - Russia Since 1855 Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3
- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since 1689 Credits: 3
- HIST 422 - Greece and Rome Credits: 3
- HIST 424 - The Middle Ages Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3
- HIST 427 - Nineteenth Century Europe Credits: 3


## General History:

- 9 credits from 100 and 200 level history courses;
- 9 credits of electives in history at the 300 level or above.


## Military History:

6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3


## 12 Credits from the Following

- HIST 240 - Warfare in the Twentieth Century Credits: 3
- HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 350 - The American Civil War Credits: 3
- HIST 381 - East Asian Military Traditions Credits: 3
- HIST 426 - French Revolution and Napoleon Credits: 3


## Non-Western History:

- A 3 credit free elective in history.

6 Credits from the Following

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 153 - Twentieth Century World Credits: 3

9 Credits from the Following

- HIST 286 - Modern Japan Credits: 3
- HIST 362 - Africa North of the Zambezi Credits: 3
or
- HIST 363 - Southern Africa Credits: 3
- HIST 370 - History and the Bible Credits: 3
- HIST 371 - History of Jews Credits: 3
- HIST 380 - Egyptology Credits: 3
- HIST 382 - Modern Asian Pacific Rim Credits: 3
- HIST 386 - Modern China Credits: 3
- HIST 462 - The Contemporary Middle East Credits: 3


## Minor in Human Resource Management (BSBA)

Students pursuing a minor in human resource management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 36

- MGMT 354 - Human Resources Management Credits: 3

Plus Three of the Four Following Courses:

- MGMT 451 - Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3


## Minor in Human Resource Management (nonBSBA)

Students pursuing a minor in human resource management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 24

- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
- MGMT 354 - Human Resources Management Credits: 3

Management Electives - Credits: 12
(Choose four courses):

- HSAF 118 - Introduction to Safety Credits: 3
- MGMT 451 - Employment Law Credits: 3
- MGMT 452 - Management-Labor Relations Credits: 3
- MGMT 455 - Compensation Management Credits: 3
- MGMT 460 - Training and Development Credits: 3


## Elective Business Courses - Credits: 6

(Choose two courses):

- ACCT 205 - Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
or
- ECON 202 - Principles of Microeconomics Credits: 3
- ECON 219 - Business Statistics Credits: 3
or
- HSAF 118 - Introduction to Safety Credits: 3
- MGMT 219 - Business Statistics Credits: 3

Two Courses at the 300-Level or Above Except:

- MGMT 450 Internship, MRKT 230


## Minor in Information Systems

Requirements for the Minor in Information Systems - Credits:

Minor in information systems requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor

A minimum of three courses must be upper division (numbered 300 or above). These three upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

For transfer students to earn a minor in information systems, the required course work for the minor must include a minimum of four courses ( 12 credits) completed at Slippery Rock University. Of these four courses at least two must be in computer science one of which must be from CPSC 305, CPSC 343, or CPSC 413.

## Required Courses

- ACCT 209 - Fundamental Accounting I Credits: 3
- ACCT 230 - Accounting Information Systems Credits: 3 or MGMT/CPSC 365 - Management Information Systems
- COMM 215 - Small Group Communication Credits: 3
or COMM 318 - Professional Presentation
- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
or CPSC 140 - Introduction to Programming Principles
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
or CPSC 305 - Introduction to Expert Systems or COMM 480-The Communication Age
- CPSC 323 - Data Base Systems Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3


## Minor in Information Technology

Minor in information technology requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor.

A minimum of two courses must be upper division (numbered 300 or above). These two upper division courses and at least one other course must be outside the student's major area requirements or electives counted toward the student's major.

For transfer students to earn a minor in information technology, the required course work for the minor must include a minimum of four courses ( 12 credits) completed at Slippery Rock University. Of these four courses at least two must be in computer science one of which must be at 300 -level or higher.

## Requirements for the Minor in Information Technology Credits: 24

Minor in information technology requires a minimum 2.000 quality point average in the courses completed at Slippery Rock University to fulfill course requirements of the minor.

## Required Courses:

- CPSC 130 - Introduction to Programming and Information Systems Credits: 3
- CPSC 140 - Introduction to Programming Principles Credits: 3
- CPSC 207 - System Software and Architecture for End Users Credits: 3
- CPSC 217 - Structured and Dynamic Web Programming Credits: 3
- CPSC 317 - Scripting Languages Credits: 3

Two Courses - Credits: 6

- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 443 - Software Project Management Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- MGMT 365 - Management Information Systems Credits: 3
or CPSC 365


## One Additional Course

3 Credits from:

- ACCT 205 - Accounting for Decision Makers Credits: 3
- ART 214 - Art Synthesis Digital Media Credits: 3
- COMM 201 - Digital Imaging Credits: 3
- COMM 254 - Video Production Credits: 3
- COMM 258 - Interactive Multimedia I Credits: 3
- COMM 350 - Editing for Video Credits: 3
- COMM 359 - Interactive Multimedia II Credits: 3
- CPSC 150 - Advanced Programming Principles Credits: 4
- CPSC 210 - Productivity Software Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- CPSC 327 - Administration and Security Credits: 3
- CPSC 343 - File Processing Credits: 3
- CPSC 413 - Systems Analysis Credits: 3
- CPSC 423 - Computer Networks Credits: 3
- CPSC 427 - Interface Design Credits: 3
- CPSC 450 - Internship Credits: 3 to 12
- ECON 219 - Business Statistics Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- MGMT 250 - Principles of Management Credits: 3
- MGMT 365 - Management Information Systems Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3


## Minor in International Affairs

## Requirements for the Minor

The specific requirement for the minor in international affairs can be found in the Department of Government and Public Affairs. The requirements include eighteen hours, six at the 100 level, to be chosen from a variety of academic disciplines and a demonstrated proficiency in a foreign language at the 103 level.

## Minor in International Business

Students pursuing a minor in international business must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 36

- INBS 227 - Introduction to International Business Credits: 3

And Three of the Following:

- INBS 326 - International Economics Credits: 3
- INBS 427 - International Financial Management Credits: 3
- MGMT 457 - International Management Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Minor in Leadership

## Requirements for the Minor

Cadets can earn a Minor in Leadership by completing all of the Military Science courses, the Leadership Development and Assessment Course the summer prior to graduation, and two additional elective courses. Students interested in this program should contact the Department of Military Science for more information.

## Minor in Literature

## Requirements for the Minor

18 credits are required for a minor in English, with a focus either on literature or on writing.

## 12 Credits From the Following Required Courses:

- ENGL 312 - Shakespeare Credits: 3
- ENGL 317 - British Literature I Credits: 3
- ENGL 319 - American Literature I Credits: 3
- ENGL 403 - Literary Criticism Credits: 3

3 Credits of the Following Required Courses:

- ENGL 242 - Afro-American Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 244 - Native American Literature Credits: 3
- ENGL 246 - Latino Literature of the U.S. Credits: 3
- ENGL 248 - Eastern Literature Credits: 3
- ENGL 316 - Asian Film Credits: 3
- ENGL 402 - World Literature Credits: 3

6 Credits of English Electives
(excluding ENGL 099, 101, 103, 210)

## Minor in Management (BSBA)

## Required BSBA Core Courses - Credits: 36

- MGMT 352 - Operations Management II Credits: 3
- MGMT 354 - Human Resources Management Credits: 3
- MGMT 457 - International Management Credits: 3

One of any 300- or 400-Level Management Courses - Credits: 12

## Minor in Management (non-BSBA)

Students pursuing a minor in management must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 24

- MGMT 250 - Principles of Management Credits: 3
- MGMT 251 - Organizational Behavior Credits: 3

Management Elective Courses - Credits: 15
(Choose five courses): Any 300 or 400 level management course except MGMT 450

Elective Business Courses - Credits: 6
(Choose two courses):

- ACCT 205 - Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3 (not both)
- ACCT 240 - Legal Environment or Business I Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- ECON 202 - Principles of Microeconomics Credits: 3 (not both)
- ECON 219 - Business Statistics Credits: 3
or
- MGMT 219 - Business Statistics Credits: 3 (not both)


## Minor in Marine Science

Requirements for the Minor - Minimum Credits: 26-27

## Required Courses

Biology Courses - Credits: 3/4

- BIOL 101 - General Biology Credits: 3
or
- BIOL 104 - Principles of Biology Credits: 4

Chemistry Courses - Credits: 8

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1


## Environmental Geosciences Courses - Credits: 3

- EGEO 131 - Oceanography Credits: 3

Marine Science Courses - Credits: 12

- MARS 241 - Marine Biology Credits: 3
- MARS 331 - Chemical Oceanography Credits: 3
- MARS 362 - Marine Geology Credits: 3
plus 3 additional credits from the Marine Science course list.


## Minor in Marketing (BSBA)

Students pursuing a minor in marketing must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

Required BSBA Core Courses - Credits: 36

- MRKT 332 - Business Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 437 - International Marketing Credits: 3

And One of Any 300- or 400-Level Marketing Courses - Credits: 12

## Minor in Marketing: (non-BSBA)

Students pursuing a minor in marketing must maintain a minimum QPA of 2.000 in all business courses taken at Slippery Rock University.

## Requirements for the Minor - Credits: 24

- MRKT 230 - Principles of Marketing Credits: 3
- MRKT 333 - Consumer Behavior Credits: 3
- MRKT 437 - International Marketing Credits: 3


## Marketing Elective Courses - Credits: 9

(Choose Three Courses): Any 300 or 400 Level Management Course Except MRKT 450.

## Elective Business Courses - Credits: 6

(Choose two courses):

- ACCT 205 - Accounting for Decision Makers Credits: 3
or
- ACCT 209 - Fundamental Accounting I Credits: 3
(not both)
- ACCT 240 - Legal Environment or Business I Credits: 3
- CPSC 210 - Productivity Software Credits: 3
- ECON 201 - Pinciples of Macroeconomics Credits: 3
or
- ECON 202 - Principles of Microeconomics Credits: 3
(not both)
- ECON 219 - Business Statistics Credits: 3
or
- MGMT 219 - Business Statistics Credits: 3
(not both)
- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 - Organizational Behavior Credits: 3
(not both)

Two MRKT Courses at the 300-level or Above Except MRKT 450.

## Minor in Mathematics

## Requirements for the Minor

- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4


## And One of the Following Tracks:

## A. Pure Mathematics Track:

- MATH 235 - Modern Concepts of Mathematics Credits: 3


## And at Least Two of the Following:

- MATH 304 - Geometric Structures Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 313 - Introductory Analysis I Credits: 3
- MATH 314 - Introductory Analysis II Credits: 3
- MATH 320 - Theory of Numbers Credits: 3
- MATH 325 - Abstract Algebra I Credits: 3
- MATH 326 - Abstract Algebra II Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3


## B. Applied Mathematics Track:

- MATH 240 - Linear Algebra and Differential Equations Credits: 3

And at Least Two of the Following:

- MATH 301 - Differential Equations I Credits: 3
- MATH 302 - Differnetial Equations II Credits: 3
- MATH 309 - Linear Algebra Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 315 - Numerical Mathematics Credits: 3
- MATH 331 - Mathematical Methods of Physics Credits: 3
- MATH 335 - Mathematical Modeling Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Meteorology

Requirements for the Minor - Credits: 18

No more than six semester credits may count toward both a major and the meteorology minor. Internship is arranged at a national weather service or other professional office. Students will be working with professional weather forecasters.

Geology Core - Credits: 12

- EGEO 121 - Meteorology Credits: 3
- EGEO 221 - Weather and Climate Forecasting Credits: 3
- EGEO 450 - Internship Credits: 3 to 12


## Elective Courses - Credits: 6

- EGEO 251 - Aviation Meteorology Credits: 3
- EGEO 340 - Air Pollution Meteorology Credits: 3
- EGEO 360 - Introduction to Hydrology Credits: 3


## Minor in Middle School Mathematics

## Requirements for the Minor

- MATH 118 - Elementary Geometry Credits: 3 or MATH 304 - Geometric Structures
- MATH 210 - Elementary Mathematics I Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 304 - Geometric Structures Credits: 3 or Math 118
- MATH 310 - Elementary Mathematics II Credits: 3
- SEFE 311 - Teaching of Mathematics in the Middle School Credits: 3


## Two Additional Courses are Required - At least one from Group A

Note: This program should prepare students to take the Praxis Exam for Middle School Mathematics Certification.
Note: Some of the courses have prerequisites which must be met.

## Group A:

- MATH 131 - Discrete Mathematics Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 235 - Modern Concepts of Mathematics Credits: 3
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 311 - Introduction to Operations Research Credits: 3
- MATH 320 - Theory of Numbers Credits: 3

Group B:

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- MATH 122 - Matrices and Linear Programming Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3


## Residency Requirement for Minor in Mathematics

To earn a minor in mathematics, all students must complete a minimum of 9 credit hours of mathematics courses, of which 6 credit hours must be at the 300 level or above, at Slippery Rock University.

## Minor in Music

Students may pursue a minor in music after passing an audition before the music faculty. The curriculum, determined through advisement, consists of 25 credits of music courses.

## Requirements for the Minor in Music - Credits: 25

## Minor in Philosophy

## Requirements for the Minor - Credits: 15

This program requires fifteen credits in philosophy with at least nine credits at the 300 level. Courses should be chosen in consultation with a member of the Department of Philosophy.

## Minor in Physics

## Requirements for the Minor

Two courses at or above the 300 level and the following:

- PHYS 211 - General Physics I Credits: 4
- PHYS 212 - General Physics II Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Minor in Political Science

## Required Courses - Credits: 18

At least 9 of the 18 required credits must be at the 300 level or above. No more than 9 of the 18 required credits may be in any one of the area elective blocks.

Three Courses From Comparative Politics - Credits: 9

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3


## Three Courses From International Relations \& Politics - Credits: 9

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Minor in Psychology

## Requirements for a Minor in Psychology - Credits: 15

Required courses:

- Elective Psychology Courses Credits: 15 (9 credits must be at the 300 or 400 level)
- PSYC 105 - Introduction to Psychology Credits: 3


## Minor in Public Administration

Students must complete 18 credits from teh list below. At least fifty percent of the courses must be taken at the 300 level or above. Not more than 6 credits of internship may be counted toward the 18 credits.

POLS 111 Grassroots Democracy
POLS 151 Introduction to Public Administration

POLS 205 Local Adminisration

POLS 232 Nonprofit Management

POLS 253 Administrative Law

POLS 255 Introduction to Public Policy

POLS 280 Community Development
POLS 305 Ethical Practice in Public Administration

POLS 331 Managing Human and Financial Community Resources
POLS 353 Resource Development and Grantwriting
POLS 359 Policy Analysis and Evaluation
POLS 450 Internship

POLS 455 The Politics of National Service and Civil Society

## Minor in Russian

## Requirements for the Minor

Russian 101, 102 and 103 satisfy the liberal arts requirement for the bachelor of arts degree in any discipline.

- RUSS 101 - Russian Language and Culture I Credits: 3
- RUSS 102 - Russian Language and Culture II Credits: 3
- RUSS 103 - Russian Language and Culture III Credits: 3
- RUSS 202 - Intermediate Russian I Credits: 3
- RUSS 305 - Russian Civilization via Film Credits: 3
- RUSS 306-20th Century Russian Legacy Credits: 3


## Minor in Spanish

## Requirements for the Minor - Credits: 18-21

18-21 credits of Spanish classes including 6 credits from the 300 level

## Minor in Spanish for Elementary Education

## Requirements for the Minor - Credits: 18

Any additional credits necessary to reach 18 hours if beginning courses were exempt.

- SPAN 101 - Spanish Language \& Culture I Credits: 3
- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3
- SPAN 200 - Intermediate Spanish Grammar Credits: 3
- SPAN 201 - Communicating in Spanish Credits: 3
- SPAN 302 - Communication in Spanish for the Elementary Classroom Credits: 3
- SPAN 309 - Hispanic Civilizatin for the Elementary Classroom Credits: 3
- SPAN 318 - Hispanic Literary Heritage Credits: 3


## Minor in Sport Management

## Requirements for the Minor - Credits: 25

The specific course of study for this major is available from the coordinator of sport management in the Department of Physical Education and Sport Management, or from the student's advisor. The student must have at least an overall GPA of 2.25 to graduate with a minor in Sport Management.

- SPMT 150 - Practical Application Credits: 1
- SPMT 194 - Introduction to Sport Management Credits: 3
- SPMT 286 - Sport Communication Credits: 3
- SPMT 294 - Sport Management and Ethics Credits: 3
- SPMT 394 - Sport Marketing Credits: 3
- SPMT 450 - Sport Management Internship Credits: 12
- SPMT 494 - Sport Management Senior Seminar Credits: 3
- SPMT 506 - Sport Facility and Event Management Credits: 3


## Minor in Statistics

## Requirements for the Minor

No more than six credits may count toward both a mathematics major and a statistics minor.

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 153 - Elementary Statistics II Credits: 3
- MATH 252 - Introduction to Statistical Modeling Credits: 3
- MATH 352 - Mathematical Statistics I Credits: 3
- MATH 353 - Mathematical Statistics II Credits: 3


## And at Least 3 Courses From:

- BIOL 325 - Biometry Credits: 3
- CPSC 323 - Data Base Systems Credits: 3
- ECON 318 - Intermediate Statistical Analysis Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- PSYC 421 - Research Methods and Statistical Applications II Credits: 3


## Minor in Theatre

## Requirements for a Minor in Theatre - Credits: 11

## Required Courses

- THEA 131 - Fundamentals of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1

2 credits required

## 3 Credits

From one of the following:

- THEA 281 - Survey of Dramatic Literature Credits: 3
or
- THEA 393 - History of Theatre Design and Architecture Credits: 3
or
- THEA 394 - Theories of Acting and Directing Credits: 3


## Electives Courses

- THEA 329
- THEA 330
- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 215 - Drawing/Drafting/CAD Credits: 3
- THEA 222 - Acting II Credits: 3
- THEA 235 - Costume Technology Credits: 3
- THEA 269 - Playwriting Credits: 3
- THEA 322 - Acting Technique Credits: 3
- THEA 324 - Stage Makeup Credits: 3
- THEA 328 - Acting Shakespeare Credits: 3
- THEA 332 - Advanced Stagecraft Credits: 3
- THEA 333 - Scene Design Credits: 3
- THEA 334 - Stage Lighting Credits: 3
- THEA 335 - Costume Design and History Credits: 3
- THEA 345 - Stage Management and Safety Credits: 3
- THEA 355 - Projects in Theatre Credits: 1 to 2
- THEA 393 - History of Theatre Design and Architecture Credits: 3
- THEA 394 - Theories of Acting and Directing Credits: 3
- THEA 450 - Internship Credits: 3 to 12
- THEA 490 - Independent Study Credits: 1 to 3
- THEA 498 - Selected Topics Credits: 1 to 3


## Minor in Women's Studies

The Women's Studies program is a multidisciplinary approach to teaching and learning. Its intent is to correct the focus of the academic establishment that has traditionally ignored, minimized, or excluded the work of women in most branches of knowledge and areas of experience. Its positive approach is a reassessment of learning and culture, and its goal is the assimilation of the best efforts of women into an integrated and equitable society. The program is not intended to replace one's major but rather to strengthen one's undergraduate preparation through a concentration of various aspects of Women's Studies. A concentration in Women's Studies prepares students for graduate study not only in that area, but also any area that requires a fully balanced, gender-sensitive understanding of society and culture. Also, Women's Studies prepares students to interact in a professional world that reflects the marked changes occurring in traditional sex roles.

## Program Requirements - Credits: 15

Currently, student may earn a minor in Women's Studies by taking fifteen credits, which must include WMST 115 and six credits numbered at the 300 level or above from the following courses, and achieving a QPA of 2.000 or better.

In addition, students may earn a Document of Academic Achievement in Women's Studies by earning twelve credits from the following courses with a minimum QPA of 2.000.

- ENGL 210 - Interpreting Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- ENGL 490 - Independent Study Credits: 1 to 3
- FREN 335 - Women in French Literature Credits: 3
- GERO 425 - Women and Aging Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HONR 386 - The Great Books Credits: 3
- HONR 387 - The Great Books Credits: 3
- HSAF 211 - Women and Health Care Credits: 3
- MUSI 301 - Women and Music Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- POLS 375 - Women and Politics Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- SASW 339 - Sex Roles and Society Credits: 3
- SPAN 335 - Women in Hispanic Literature Credits: 3
- WMST 115 - Introduction to Women's Studies Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3
- WMST 450 - Internship Credits: 3 to 12


## Minor in Women's Studies

## Requirements for the Minor in Women's Studies - Credits: 18

Currently students may earn a minor in Women's Studies by taking eighteen credits.

## Which Must Include

WMST 115 - Introduction to Women's Studies and six credits numbered at the 300 level or above, and achieving a QPA of 2.000 or better.

And any department 450 - Internship and any department 490 - Independent Study.

- ENGL 210 - Interpreting Literature Credits: 3
(designated sections)
- ENGL 243 - Literature of the Women's Movement Credits: 3
- HIST 319 - History of Women to 1750 Credits: 3
- HIST 320 - History of Women from 1750 to the Present Credits: 3
- HIST 442 - Studies in U.S. Women's History Credits: 3
- HONR 386 - The Great Books Credits: 3
- HONR 387 - The Great Books Credits: 3
- HSAF 211 - Women and Health Care Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- POLS 375 - Women and Politics Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- SASW 339 - Sex Roles and Society Credits: 3
- WMST 115 - Introduction to Women's Studies Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3
- WMST 450 - Internship Credits: 3 to 12


## In Addition

Students may earn a Document of Academic Achievement in Women's Studies by earning twelve credits selected from the list above with a minimum QPA of 2.000.

## Minor in Writing

## Requirements for the Minor

## 12 Hours From the Following Required Courses:

- ENGL 204 - Composition and Rhetoric Credits: 3
- ENGL 205 - Technical and Scientific Writing Credits: 3
- ENGL 240 - Creative Writing: Fiction Credits: 3
- ENGL 305 - Practicum: Teaching Writing Credits: 3
- ENGL 306 - Advanced Technical and Scientific Writing Credits: 3
- ENGL 308 - Advertising Copywriting Credits: 3
- ENGL 309 - Business and Administrative Writing Credits: 3
- ENGL 340 - Creative Writing: Poetry Credits: 3
- ENGL 450 - Internship Credits: 3 to 6


## 3 Credits of the Following Required Courses

- ENGL 331 - Historical Development of the English Language Credits: 3
- ENGL 332 - Traditional Grammar Credits: 3
- ENGL 333 - Concepts in Linguistics Credits: 3

6 Credits of English Electives
(excluding ENGL 009, 101, 103, 210)

## Music (BA)

Total Degree Credits: 120

## Requirements for the Major - Credits: 40

All prospective music majors must audition with a faculty committee from the Department of Music.

Required Music Courses - Credits: 40

- Applied Major - Semesters: 7
(* see footnote)
- Ensemble - Semesters: 7
(* see footnote)
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## Footnote

* See chairperson of Department of Music for an explanation of this requirement.


## Modern Language Requirement

All candidates for the bachelor of arts degree must demonstrate competency in a modern language at the 103 level through either coursework or placement tests.

## Music (BM)

Total Degree Credits: 120

## Specialization: Performance

## Requirements for Music (BM) - Credits: 78

Required Courses - Credits: 30

- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 299 - Diction for Singers Credits: 1 (voice majors only)
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 431 - Pedagogy Credits: 1
- MUSI 473 - History of Music III Credits: 3

Electives - Credits: 13

Selected from the following:

- MUSI 128 - Applied Alexander Technique Credits: 1
- MUSI 134 - Class Voice II Credits: 1
- MUSI 135 - Class Strings Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 233 - Chamber Music Performance Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 246 - Class Woodwinds Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 389 - Applied Composition Credits: 1
- MUSI 499 - Applied Recital Credits: 1
* Applied Major - Credits: 24
* see footnote
* Applied Minor - Credits: 4
* see footnote
* Applied Recital - Credits: 1
* see footnote
* Ensemble - Semesters: 8
* see footnote


## Footnote

* See chairperson of Department of Music for an explanation of these requirements.


## Music Education (BS)

The Department of Music offers an undergraduate program in music education which meets requirements for the National Association Schools of Music (NASM) and state certification in music, grades K-12. Prospective music teachers are required to take coursework that is balanced to offer a broad education, including courses in music, music performance, professional education, and liberal studies. Students are required to complete 40 contact hours in elementary and secondary music education settings during the freshman and sophomore years. The junior and senior years allow the students the opportunity to apply the philosophies, methodologies, and techniques that they have observed and discussed in classes. For four weeks during field experience and sixteen weeks of student teaching, students will observe, assist and teach in a public school setting.

Music Education students are encouraged to join the Pennsylvania Collegiate Music Educators Association (PCMEA). The PCMEA meets monthly, offers workshops and conferences and promotes pre-professional experiences for the music education major.

Requirements for acceptance to the Teacher Certification Programs during the sophomore or junior year may include but also exceed the following: completion of 48 credit hours; minimum QPA requirements for Basic Competency courses, music education program, and cumulative QPA; passing scores on Praxis exams; completion of 40 hours of observations in educational settings; evidence of professional conduct; criminal and child abuse background checks; and a TB test.

The guidelines on admission, professional conduct, and student teaching for this department include and may go beyond those required for the College of Education as a whole. Details are available in the Department of Music or from the student's advisor. See also the Programs for Certification of Professional School Personnel and the Teacher Education Policy Manual, available in 105 McKay Education Building.

The double majors, BM in Performance/BS in Music Education, the BM in Performance/BS in Music Therapy, the BS in Music Education/BS in Music Therapy are available for students who wish to pursue combined degrees. Please see Chairperson for the semester by semester schedule.

## Requirements for the Major - Credits: 61

All prospective music education majors must audition with a faculty committee of the Department of Music.

## Required Music Courses

- Applied Major (7 credits)
* see footnote
- Applied Minor (4 credits)
* see footnote
- Ensemble (7 credits)
* see footnote
- MUSI 133 - Class Voice I Credits: 1
instrumental majors only
- MUSI 134 - Class Voice II Credits: 1
- MUSI 135 - Class Strings Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 246 - Class Woodwinds Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 299 - Diction for Singers Credits: 1
voice majors only
- MUSI 300 - Marching Band Field Charting Credits: 1
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 334 - Secondary School Music Credits: 2
- MUSI 335 - Elementary Music Methods Credits: 2
- MUSI 336 - Instrumental Methods Credits: 2
- MUSI 337 - Instrumental Rehearsal Techniques Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1


## Other Courses Required

- CDEV 248 - Human Development and Education Credits: 3
- CDEV 342 - Educational Psychology Credits: 3
or SEFE 380 - History and Philosophy of Education
- MUSI 455 - Student Teaching - Music Credits: 12, 6, 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3
or CEDP 342 - Educational Psychology


## Footnote

* See chairperson of Department of Music for an explanation of this requirement.


## Degree Completion in Four Years Music Education (BS MusEd)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3 or higher
- MUSI 131 - Class Piano I Credits: 1
- MUSI 132 - Class Piano II Credits: 1
- MUSI 133 - Class Voice I Credits: 1
- MUSI 134 - Class Voice II Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1


## One of the Following Courses

- MUSI 179 - Applied Music Credits: 1
- MUSI 181 - Applied Voice Credits: 1
- MUSI 182 - Applied Strings Credits: 1
- MUSI 183 - Applied Brass Credits: 1
- MUSI 184 - Applied Woodwinds Credits: 1
- MUSI 185 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1

Sophomore Year - Total Hours: 30

- CDEV 248 - Human Development and Education Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- MUSI 234 - Class Piano III Credits: 1
- MUSI 235 - Class Piano IV Credits: 1
- MUSI 245 - Class Brass Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- SEFE 200 - Introduction to Education Credits: 3

One of the Following Courses

- MUSI 279
- MUSI 281
- MUSI 282
- MUSI 283
- MUSI 284
- MUSI 285
- MUSI 279 - Applied Piano Credits: 1
- MUSI 281 - Applied Voice Credits: 1
- MUSI 282 - Applied Strings Credits: 1
- MUSI 283 - Applied Brass Credits: 1
- MUSI 284 - Applied Woodwinds Credits: 1
- MUSI 285 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Junior Year- Total Hours: 30

- PESM - Credits: 2
- Liberal Studies - Credits: 3
- MUSI 135 - Class Strings Credits: 1
- MUSI 300 - Marching Band Field Charting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 334 - Secondary School Music Credits: 2
- MUSI 335 - Elementary Music Methods Credits: 2
- MUSI 336 - Instrumental Methods Credits: 2
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
or
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## One of the Following Courses

- MUSI 379 - Applied Piano Credits: 1
- MUSI 381 - Applied Voice Credits: 1
- MUSI 382 - Applied Strings Credits: 1
- MUSI 383 - Applied Brass Credits: 1
- MUSI 384 - Applied Woodwinds Credits: 1
- MUSI 385 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Senior Year- Total Hours: 30

- Liberal Studies - Credits: 12
- CDEV 342 - Educational Psychology Credits: 3
or SEFE 380 - History and Philosophy in Education
- MUSI 337 - Instrumental Rehearsal Techniques Credits: 1
- MUSI 455 - Student Teaching - Music Credits: 12, 6, 3
- SEFE 380 - History and Philosophy of Education Credits: 3
or CEDP 342 - Educational Psychology


## One of the Following Courses

- MUSI 479 - Applied Piano Credits: 1
- MUSI 481 - Applied Voice Credits: 1
- MUSI 482 - Applied Strings Credits: 1
- MUSI 483 - Applied Brass Credits: 1
- MUSI 484 - Applied Woodwinds Credits: 1
- MUSI 485 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Music Therapy (BS)

Music therapy is a field that uses music along with the personality of the therapist as a treatment for rehabilitating, maintaining, and improving the lives of persons with physical, intellectual, and emotional disabilities. As a member of the therapeutic team, the music therapist participates in assessing problems, setting treatment goals, and planning and carrying out music experiences to meet these goals.

Career opportunities are available for music therapists in rehabilitation centers, hospitals, community mental health clinics, nursing homes, day care centers, and correctional facilities. Some music therapists establish their own private studios, usually working with clients referred by local health professionals. In addition, some public school systems are beginning to include music therapists in their special education programs.

Music therapy students can be involved in the campus Music Therapy Club, which promotes the profession, offers workshops for members and other interested students, and organizes service projects. Club members also participate in both the regional and national professional student organizations of the American Music Therapy Association. Through this involvement they have opportunities for leadership, scholarships, and participation at professional conferences.

Music therapy students have the opportunity to take field trips and observe music therapy clinical work in their freshman year. Six semesters of further clinical experience in a variety of community settings provide practical application of music therapy course work. A senior practicum course provides an opportunity to mentor and supervise beginning music therapy students in the clinical experience. A required six-month music therapy internship culminates the educational program with placement opportunities in approximately 150 clinical settings throughout the United States. Professional music therapists supervise the internship programs, which meet the training requirements of the American Music Therapy Association. Students may select an internship in settings such as hospitals, clinics, day care facilities, schools, community mental health centers, substance abuse facilities, nursing homes, hospice, rehabilitation centers, and correctional facilities. Several Slippery Rock University alumni have found employment at their internship facility.

The double majors, BM in Performance/BS in Music Education, the BM in Performance/BS in Music Therapy, the BS in Music Education/BS in Music Therapy are available for students who wish to pursue combined degrees. Please see Chairperson for the semester by semester schedule.

## Requirements for the Major - Credits: 73

All prospective music therapy majors must audition with a faculty committee of the Department of Music.

## Required Music Courses - Credits: 52

- Applied Major (7 credits)
(* see footnote)
- Applied Minor (6 credits)
(* see footnote)
- Ensemble (7 credits)
(* see footnote)
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 247 - Class Percussion Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## Required Music Therapy Courses - Credits: 21

- MUSI 127 - Orientation to Music Therapy Credits: 1
- MUSI 199 - Fundamental Skills in Music Therapy Credits: 1
- MUSI 228 - Therapeutic Musical Strategies Credits: 1
- MUSI 236 - Behavioral Techniques in Music Therapy Credits: 2
- MUSI 312 - Music Therapy for Children Credits: 3
- MUSI 327 - Psychology of Music Credits: 3
- MUSI 428 - Music Therapy Practicum Credits: 3
- MUSI 433 - Clinical Integration Credits: 1
six semesters of clinical experience are required
- MUSI 440 - Music Therapy for Adult Clients Credits: 3
- MUSI 450 - Music Therapy Internship Credits: 3 to 12


## Other Courses Required by the American Music Therapy Association

3 credits from SASW, PSYC 100 or 105, 376, and 3 additional credits of psychology.

- BIOL 216 - Anatomy and Physiology Credits: 3
or
- BIOL 217 - Anatomy and Physiology Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3


## Footnote

* See chairperson of Department of Music for an explanation of these requirements.


## Degree Completion in Four Years Music Therapy (BS)

## Completion Hours: 120

## Freshman Year - Total Hours: 33

- PESM 141- Personal Physical Fitness Credits: 1 \& PESM \& Dance Activity
- SASW Credits: 3
- Liberal Studies - Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- MUSI 127 - Orientation to Music Therapy Credits: 1
- MUSI 131 - Class Piano I Credits: 1
- MUSI 132 - Class Piano II Credits: 1
- MUSI 133 - Class Voice I Credits: 1
- MUSI 137 - Class Guitar I Credits: 1
- MUSI 138 - Class Guitar II Credits: 1
- MUSI 151 - Music Theory and Analysis I Credits: 2
- MUSI 154 - Musicianship Skills I Credits: 1
- MUSI 199 - Fundamental Skills in Music Therapy Credits: 1
- MUSI 253 - Music Theory and Anallysis II Credits: 2
- MUSI 256 - Musicianship Skills II Credits: 1
- PSYC 100 - Psychology Applied Credits: 3
or
- PSYC 105 - Introduction to Psychology Credits: 3


## One of the Following Courses

- MUSI 179 - Applied Music Credits: 1
- MUSI 181 - Applied Voice Credits: 1
- MUSI 182 - Applied Strings Credits: 1
- MUSI 183 - Applied Brass Credits: 1
- MUSI 184 - Applied Woodwinds Credits: 1
- MUSI 185 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Sophomore Year - Total Hours: 31

- Liberal Studies - Credits: 6
- COMM 200 - Public Speaking Credits: 3
- MUSI 228 - Therapeutic Musical Strategies Credits: 1
- MUSI 234 - Class Piano III Credits: 1
- MUSI 235 - Class Piano IV Credits: 1
- MUSI 236 - Behavioral Techniques in Music Therapy Credits: 2
- MUSI 247 - Class Percussion Credits: 1
- MUSI 254 - Music Theory and Analysis III Credits: 2
- MUSI 255 - Music Theory and Anlysis IV Credits: 2
- MUSI 257 - Musicianship Skills III Credits: 1
- MUSI 258 - Musicianship Skills IV Credits: 1
- MUSI 273 - History of Music I Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3


## One of the Following Courses

- MUSI 279 - Applied Piano Credits: 1
- MUSI 281 - Applied Voice Credits: 1
- MUSI 282 - Applied Strings Credits: 1
- MUSI 283 - Applied Brass Credits: 1
- MUSI 284 - Applied Woodwinds Credits: 1
- MUSI 285 - Applied Percussion Credits: 1

One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Summer I

- Liberal Studies - Anatomy - Credits: 6


## Junior Year - Total Hours: 32

- Applied Voice (minor applied lesson) - Credits: 2
- Liberal Studies (Psych) - Credits: 6
- MUSI 312 - Music Therapy for Children Credits: 3
- MUSI 327 - Psychology of Music Credits: 3
- MUSI 332 - Vocal Conducting Credits: 1
- MUSI 333 - Instrumental Conducting Credits: 1
- MUSI 350 - Computer Technology in Music Credits: 2
- MUSI 351 - Arranging \& Orchestration Credits: 2
- MUSI 360 - Keyboard Improvisation Credits: 1
- MUSI 361 - Instrumental Improvisation Credits: 1
- MUSI 373 - History of Music II Credits: 3
- MUSI 473 - History of Music III Credits: 3


## One of the Following Courses

- MUSI 379 - Applied Piano Credits: 1
- MUSI 381 - Applied Voice Credits: 1
- MUSI 382 - Applied Strings Credits: 1
- MUSI 383 - Applied Brass Credits: 1
- MUSI 384 - Applied Woodwinds Credits: 1
- MUSI 385 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Senior Year - Total Hours: 18

- Liberal Studies - Credits: 3
- MUSI 428 - Music Therapy Practicum Credits: 3
- MUSI 433 - Clinical Integration Credits: 1
- MUSI 440 - Music Therapy for Adult Clients Credits: 3
- MUSI 450 - Music Therapy Internship Credits: 3 to 12
- PSYC 276 - Abnormal Behavior Credits: 3


## One of the Following Courses

- MUSI 479 - Applied Piano Credits: 1
- MUSI 481 - Applied Voice Credits: 1
- MUSI 482 - Applied Strings Credits: 1
- MUSI 483 - Applied Brass Credits: 1
- MUSI 484 - Applied Woodwinds Credits: 1
- MUSI 485 - Applied Percussion Credits: 1


## One of the Following Courses

- MUSI 115 - Concert Choir Credits: 1
- MUSI 118 - Marching Pride Credits: 1
- MUSI 119 - Concert Band Credits: 1
- MUSI 121 - Orchestra Credits: 1


## Nursing (BSN)

## Requirements for the Major - Credits: 39

All students must also have a total of 48 credits in Liberal Studies courses for graduation.

## Core Courses

- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 313 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 314 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 322 - The Teaching-Learning Process in Nursing Credits: 3
- NURS 327/328 - Group Process in Nursing and Health Care/Clinical Credits: 3
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 416/417-Case Management in Nursing Credits: 3
- NURS 422 - Nursing Research Credits: 3
- NURS 426/427 - Community Health Nursing/Clinical Credits: 3

Nursing Electives - Credits: 6

6 credits from the following:

- NURS 412/413 - Nursing Process with School Credits: 6
- NURS 415 - Management of School Health Services by School Nurses Credits: 3
- NURS 429 - Financial Management for Nursing Care Managers Credits: 3
- NURS 498 - Selected Topics Credits: 3
- NURS 510 - Cardiovascular Function: Assessment and Treatment Credits: 3
- NURS 511 - Advanced Healthcare Informatics Credits: 3

Required Non-Nursing Courses - Credits: 6

30 credits are granted through advanced placement following direct articulation for diploma graduates. (Upon successful completion of the NCLEX-RN). All credits for Associate Degree graduates are transferred in.

- PHIL 325 - Medical/Health Care Ethics Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Degree Completion in Two Years

(for students having 63 or more credits in transfer)

## General electives to complete: $\mathbf{1 2 0}$ total hours

## Junior Year - Total Hours: 21

- NURS Elective Credits: 3
- Electives
(** See footnote)
- NURS 311 - Introduction to Health Care Informatics Credits: 3
- NURS 312 - Nursing in Transition Credits: 3
- NURS 313 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 314 - Health Assessment and Promotion/Clinical Credits: 3
- NURS 322 - The Teaching-Learning Process in Nursing Credits: 3
- NURS 327/328 - Group Process in Nursing and Health Care/Clinical Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3


## Senior Year - Total Hours: 18

- NURS Electives Credits: 3
- General electives to complete 120 total hours*
- NURS 408 - Delivery of Nursing Care in a Managed Cared Environment/Clinical Credits: 3
- NURS 416/417 - Case Management in Nursing Credits: 3
- NURS 422 - Nursing Research Credits: 3
- NURS 426/427 - Community Health Nursing/Clinical Credits: 3
- SASW 317 - Statistical Methods Credits: 3


## Footnotes

> * Note: All students must also have a total of 48 credits in Liberal Studies courses for graduation.
> ** Electives depend on number of transfer credits.

## Requirements for School Nurse Certification

Through careful selection of electives, nursing majors can qualify for certification as a school nurse by taking the following

In addition, the student must have two courses in college English ( 6 credits), two courses in college math ( 6 credits), and a minimum QPA of 2.80. English courses must include a writing course and a
literature course. Statistics will only count as a math course if offered through the Math Department.

- NURS 412/413 - Nursing Process with School Credits: 6
- NURS 415 - Management of School Health Services by School Nurses Credits: 3
- SPED 100 - Introduction to Special Education Credits: 3
or
- SPED 105 - Americans with Disabilities Credits: 3


## Academic Standing

BSN majors must attain a grade of C or better in all nursing major theory courses and pass all practica. In the event that a final course grade of C or practicum grade of P is not attained, the course and/or practicum may be repeated one time. Failure to achieve the required theory or practicum grade on the second attempt will result in the removal of the student from the nursing major.

## Office for Students with Disabilities

122 Bailey Library<br>724-738-4877

## Assistant Director of Retention/Director, Disabled Student Services Linda Smith

## Secretary

Kimberly Zedreck
The Office for Students with Disabilities provides accommodations and services to ensure equal access to education as intended by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 for students with disabilities including but not limited to learning, physical, hearing, vision or psychological disabilities. At Slippery Rock University we want all students to achieve academic success, and are interested in making every effort to accommodate and serve students with disabilities. To be eligible for services appropriate documentation must be provided. Documentation may include medical diagnosis, psychological evaluations, etc. Upon acceptance to Slippery Rock, students with disabilities are encouraged to make an appointment with the Director so a personal interview can be scheduled.

## Office of Retention Services

116 North Hall Welcome Center
724-738-2011

## Director

Carla Hradisky-Coffelt

## Secretary

Angela Koch

Service to our students is paramount at Slippery Rock University. We are not only interested in recruiting students to The Rock, but are equally as interested in seeing them through to success. Through the Office of Retention Services, Slippery Rock begins early in the first semester
freshman year to retain its students by addressing the issues that a first semester freshman will experience. Assistance is offered to freshman students through a computerized assessment program call SAPA (Student Attendance, Performance and Adjustment Report).

Within the first 5 weeks of the semester, faculty who teach first year students are asked, "How are your freshman students doing?" These questions are asked to get a better sense if the students are attending class regularly, if they are prepared, doing homework assignments and are meeting success. Once the freshmen are evaluated, academic advisors along with key university personnel are notified of the problems.

During one-on-one interviews with SAPA cited student, university personnel have the opportunity to speak with students directly, refer them to academic tutoring, support sessions and recommend both personal and career counseling as needed.

FYRST students who have interrupted their attendance at The Rock for any reason may resume studies at Slippery Rock University by reapplying for admission through the Retention Services office.

## Osteopathic Medicine

## Lake Erie College of Osteopathic Medicine (LECOM)

Under this joint agreement between Lake Erie College of Osteopathic Medicine (LECOM) and Slippery Rock University (SRU), select undergraduate students who have successfully completed specific course work at SRU may continue their education in medicine at LECOM. This program is comprised of two phases: Phase I consists of the first three years of undergraduate education at SRU; Phase II consists of the remaining four years of medical school education at LECOM and its associated clinical sites. Slippery Rock University will confer the Bachelor of Science degree in Biology to Slippery Rock students who have successfully completed the Slippery Rock courses in Phase I at SRU and the first four semesters (pre-clinical) of LECOM's Academic curriculum.

To be eligible for the " $3+4$ " Program, SRU students must satisfy the requirements listed below for the Bachelor of Science degree in Biology at SRU for the " $3+4$ " program, and indicate interest to enter into the " $3+4$ " Program during their sophomore year. To gain final acceptance to Phase II of the " $3+4$ " Program, students must apply through the American Association of Colleges of Osteopathic Medicine (AACOMAS) to LECOM by August 30 beginning the third year. A LECOM Secondary application must also be completed prior to scheduling an Admissions Interview. Letters of recommendation and supporting documentation, including certified transcripts from all undergraduate and graduate institutions attended, must be submitted for review by LECOM.

Admissions to LECOM is subject to the applicant's meeting the following criteria:

- SAT minimum 1100
- High School Grade Point Average 3.4 or better
- High School Class Rank Top 25\%
- Slippery Rock University GPA (by end of junior year) 3.3 or better
- MCAT (taken at the end of the junior year or earlier) 24 minimum total score; no lower than 7 in any category.
- Consideration is also given to personal traits and demonstrated desire to become an osteopathic physician.
- Appropriate letters of recommendation

Students successful in Phase I will be interviewed by LECOM in the third year prior to admission to Phase II of the " $3+4$ " program. Final acceptance of candidates to Phase II of the " $3+4$ " Program will be determined by LECOM.

Students will be awarded the Bachelor of Science degree in Biology from SRU upon receipt of an official transcript from LECOM indicating successful completion (grade of "C" or better in each course) of the first year of LECOM's curriculum. Students will be awarded the degree of Doctor of Osteopathic Medicine by LECOM after successfully completing the complete four-year medical curriculum, successfully passing COMLEX I and COMLEX II of the National Board of Osteopathic Medicine Examiners, and otherwise satisfying all other requirements as identified by LECOM for graduation.

## Required courses at SRU:

## Biology Courses - Credits: 25

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 410 - Animal Physiology Credits: 3


## Chemistry Courses - Credits: 19

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 335 - Biochemistry Credits: 3
(or courses approved by the Biology Department Chairperson)
Mathematics Course - Credits: 4
- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 7

- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


# Parks and Recreation/Environmental Education (BS) 

## Requirements for the Major - Credits: 60

## Requirements for All Specializations

## Core Courses - Credits: 27

(Therapeutic Recreation Specialization ( 24 credits) does not require 207 or CPSC 110)

- CPSC 110 - Computer Concepts Credits: 3
(RRM/T) or PREE 207
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 207 - Computer Aided Planning and Management Credits: 3 or CPSC 110
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 450 - Internship Credits: 9 to 12

Track Courses - Credits: 33-36

## Professional Electives Selected in Consultation with Advisor

 - Credits: 12
## Choose One Specialization

Specialization in Park and Resource Management - Credits:

## 33

Elective tracks in park and open space planning, park law enforcement, environmental education/interpretation, and outdoor leadership.

- PREE 170 - Fundamentals of Park and Resource Management Credits: 3
- PREE 213 - Environmental Resource Analysis Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3
- PREE 313 - Recreation Area Design Credits: 3
- PREE 347 - Interpretive Methods and Programming Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 372 - Visitor Services Management Credits: 3
- PREE 377 - Cultural Resources Management Credits: 3
- PREE 378 - Parks, Wildlife and Wildlife Management Credits: 3


## Specialization in Resort Recreation Management/Tourism -

Credits: 33

- ACCT 205 - Accounting for Decision Makers Credits: 3


## or

- ACCT 209 - Fundamental Accounting I Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3
- PREE 215 - Park and Recreation Public Relations Credits: 3
- PREE 230 - Recreation Leadership Credits: 3
- PREE 234 - Leisure Services Programming Credits: 3
- PREE 311 - Principles of Commercial Recreation/Tourism Credits: 3
- PREE 316 - Management of Leisure Services and Commercial Facilities Credits: 3
- PREE 342 - Group Facilitation and Leadership Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 416 - Resort/Conference Group Recreation Credits: 3
- PREE 436 - Tournament Structure and Administration Credits: 3

Specialization in Therapeutic Recreation Services - Credits: 36

Therapeutic recreation specialists, also known as recreational therapists, use selective activities to address the physical, cognitive, and psychosocial needs of persons with illness or disability. Activity modalities and intervention techniques are utilized to improve function/health and to promote independence and wellness.

The bachelor of science degree emphasis in therapeutic recreation supplements a solid liberal studies foundation with course work related to human development/growth and movement. Field work, practicum, and a culminating internship assist students in gaining experience in a TR setting prior to graduation. In addition, students may choose from several specialty tracks which offer focused coursework to enhance knowledge and skills in a given area, i.e., mental health, rehabilitation, corrections, gerontology, and community. Minors are also available in related areas such as gerontology, exceptionalities, psychology, sociology, and adapted physical activity and rehabilitation.

The therapeutic recreation program is designed with the intent that students will meet the eligibility requirements to sit for the national certification exam administered by the National Council for Certification.

- CDEV 248 - Human Development and Education Credits: 3
- ERS 264 - Applied Anatomy Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PREE 220 - Therapeutic Recreation Services Credits: 3
- PREE 232 - Therapeutic Recreation for People with Physical Disabilities Credits: 3
- PREE 233 - Therapeutic Recreation for People with Mental Health and Psychosocial Disorders Credits: 3
- PREE 314 - Clinical Aspects of Therapeutic Recreation Credits: 3
- PREE 319 - Client Assessment in Therapeutic Recreation Credits: 3
- PREE 320 - Therapeutic Recreation Program Design Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PREE 423 - Therapeutic Recreation Interventions/Leisure Education Credits: 3


## Therapeutic Recreation Certification Requirements:

In addition to the 60 credits required in the Therapeutic Recreation major both PSYC 105 and 276 must be completed by the student to be eligible to take the NCTRC Certification Exam.

## Degree Completion in Four Years Park and Resource Management (BS)

## Completion Hours: 120

Freshman Year - Total Hours: 27

- Liberal Studies Credits: 15
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 170 - Fundamentals of Park and Resource Management Credits: 3
- PREE 207 - Computer Aided Planning and Management Credits: 3


## Sophomore Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 18
- PREE 213 - Environmental Resource Analysis Credits: 3
- PREE 260 - Natural History of Ecosystems I Credits: 3
- PREE 261 - Natural History of Ecosystems II Credits: 3


## Junior Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 12
- PREE 313 - Recreation Area Design Credits: 3
- PREE 347 - Interpretive Methods and Programming Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
(summer)
- PREE 372 - Visitor Services Management Credits: 3
- PREE 378 - Parks, Wildlife and Wildlife Management Credits: 3

Senior Year - Total Hours: 33

- PREE Electives Credits: 6
- Liberal Studies Credits: 3
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 377 - Cultural Resources Management Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 450 - Internship Credits: 9 to 12
(summer)
- PREE 475 - Park and Resource Management Credits: 3


## Degree Completion in Four Years Resort Recreation Management/Tourism

## Completion Hours: 120

## Freshman Year - Total Hours: 27

- Liberal Studies Credits: 18
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 215 - Park and Recreation Public Relations Credits: 3


## Sophomore Year - Total Hours: 30

- Liberal Studies Credits: 21
- CPSC 110 - Computer Concepts Credits: 3
- PREE 230 - Recreation Leadership Credits: 3
- PREE 234 - Leisure Services Programming Credits: 3

Junior Year - Total Hours: 30

- PREE Elective Credits: 6
- Liberal Studies Credits: 6
- ACCT 205 - Accounting for Decision Makers Credits: 3
- MRKT 230 - Principles of Marketing Credits: 3
- PREE 311 - Principles of Commercial Recreation/Tourism Credits: 3
- PREE 316 - Management of Leisure Services and Commercial Facilities Credits: 3
- PREE 342 - Group Facilitation and Leadership Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
(summer)


## Senior Year - Total Hours: 33

- PREE Electives Credits: 6
- Liberal Studies Credits: 3
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 416 - Resort/Conference Group Recreation Credits: 3
- PREE 436 - Tournament Structure and Administration Credits: 3
- PREE 450 - Internship Credits: 9 to 12 (summer)


## Degree Completion in Four Years Therapeutic Recreation

## Completion Hours: 120

Freshman Year - Total Hours: 27

- Liberal Studies Credits: 18
- PREE 110 - Foundations of Parks and Recreation Credits: 3
- PREE 120 - Inclusive Leisure Services Credits: 3
- PREE 232 - Therapeutic Recreation for People with Physical Disabilities Credits: 3

Sophomore Year - Total Hours: 30

- PREE Elective Credits: 3
- Liberal Studies Credits: 15
- CDEV 248 - Human Development and Education Credits: 3
- PREE 220 - Therapeutic Recreation Services Credits: 3
- PREE 233 - Therapeutic Recreation for People with Mental Health and Psychosocial Disorders Credits: 3
- PREE 314 - Clinical Aspects of Therapeutic Recreation Credits: 3


## Junior Year - Total Hours: 30

- PREE Elective Credits: 6
- Liberal Studies Credits: 9
- ERS 264 - Applied Anatomy Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PREE 319 - Client Assessment in Therapeutic Recreation Credits: 3
- PREE 320 - Therapeutic Recreation Program Design Credits: 3
- PREE 351/352 - Practicum in Recreation Leadership/Environmental Education Credits: 3
(summer)


## Senior Year - Total Hours: 33

- PREE Electives Credits: 3
- Liberal Studies Credits: 6
- PREE 318 - Park and Recreation Administration Credits: 3
- PREE 415 - Issues in Parks and Recreation Credits: 3
- PREE 420 - Recreation and the Aging Process Credits: 3
- PREE 423 - Therapeutic Recreation Interventions/Leisure Education Credits: 3
- PREE 450 - Internship Credits: 9 to 12
(summer)


## Pharmacy - Biology

The Lake Erie College of Osteopathic Medicine (LECOM) School of Pharmacy and Slippery Rock University (SRU) are committed to the training of future pharmacy practitioners. Slippery Rock University and LECOM School of Pharmacy offer an accelerated, five-year Doctor of Pharmacy program. Under this joint agreement students will successfully complete the two-year undergraduate program in pre-pharmacy at SRU and then matriculate into LECOM School of Pharmacy to complete the professional curriculum of the Doctor of Pharmacy degree (Pharm.D) in three years. The accelerated professional pharmacy curriculum at LECOM School of Pharmacy is offered in a 12month program per academic year.
The " $2+3$ " Accelerated Pharmacy Program is an early entry pre-pharmacy program that will give students the opportunity to complete their pharmacy education in two phases: Phase I consists of the first two years of undergraduate education at SRU; and Phase II consists of the remaining three years of pharmacy education at LECOM School of Pharmacy.

For admission to Phase I of the Program, students must fulfill the following requirements:

- SAT scores (or ACT scores) - 1100 (total of 24)
- High School Grade Point Average - 3.2 or better out of 4.0
- Class rank - Top $25 \%$ of the class
- Recommendation - Two letters of recommendation
- Candidate potential - Evidence of scholarly activities and desire to become a pharmacist
For admission to Phase II of the Program, students must fulfill the following requirements:
- Complete the pre-pharmacy curriculum in Phase I of the " $2+3$ " Accelerated Pharmacy Program, as described below.
- Earn a minimum GPA of 3.2 in Phase I of the program with no individual grade lower than a "C".
- Earn a GPA of 3.2 or higher for science and mathematics courses.
- Submit two letters of recommendation. One of these letters must be from the Health Professions Committee at SRU. The letter will address personal growth of the student during Phase I of the program, as well as the student's maturity, responsibility, and desire to become a pharmacist.
- Demonstrates leadership potential and commitment to the pharmacy profession.
- Submit a completed application for admission to the LECOM School of Pharmacy.
Prospective students should contact LECOM directly for anticipated admission guidelines at 814.866 .6641 or at
pharmacy@lecom.edu. The Doctor of Pharmacy Degree will be conferred upon successful completion of Phase I and Phase II of the program, both didactic and clinical, and recommendation by both the faculty and administration of LECOM School of Pharmacy.

Additional information is available at
www.lecom.edu/pharmacy/agreement/affiliation.htm.

## Required courses at SRU:

## Biology Courses - Credits: 11

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4
- BIOL 325 - Biometry Credits: 3


## Chemistry Courses - Credits: 16

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1

Mathematics Course - Credits: 4

- MATH 225 - Calculus I Credits: 4


## Physics Courses - Credits: 4

- PHYS 211 - General Physics I Credits: 4


## Other Courses - Credits: 30

- Computer Science
- College Writing I \& II
- Public Speaking
- Economics
- Psychology or Sociology
- Behavioral Science
- Liberal Studies (9)


## Pharmacy - Chemistry

A 3+3 affiliation agreement with the Lake Erie College of Medicine's School of Pharmacy (LECOM) would give the students in SRU's Biochemistry program a pharmacy option. Students selecting this option would receive a B.S. degree in Chemistry (Biochemistry Concentration) after completing the first year of a 3-year doctoral program at LECOM. Twenty-seven credits, including 9 in chemistry, 4 in biology, and 6 in liberal studies, would be transferred from

LECOM to SRU at that time. Please read the Pharmacy - Biology option for further details on admission requirements, etc.

Biochemistry students, who choose the pharmacy option, would complete nearly the same curriculum at SRU as those who do not choose the pharmacy option. Computer Science (130 or 140), required in our current Biochemistry program, is replaced by Elementary Statistics (Math 114) in the pharmacy option.

All courses from LECOM transfer to the B.S. Chemistry program Biochemistry/Pharmacy option. Four LECOM courses replace four SRU courses from our current Biochemistry program. The SRU courses are Microbiology (Biol 333), Cell Biology (Biol 335), Molecular Biology (Biol 370) and either Analytical Chemistry (Chem 350,351 ) or Instrumental Analysis (Chem 425, 426).

## Required courses at SRU:

## Biology Courses - Credits: 8

- BIOL 104 - Principles of Biology Credits: 4
- BIOL 250 - Genetics Credits: 4

Chemistry Courses - Credits: 32

- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- CHEM 301 - Physical Chemistry I Credits: 3
- CHEM 321 - Physical Chemistry Laboratory I Credits: 1
- CHEM 335 - Biochemistry Credits: 3
- CHEM 336 - Biochemistry Laboratory I Credits: 1
- CHEM 338 - Biochemistry Laboratory II Credits: 1


## Chemistry Electives - Credits: 4

- CHEM 350 - Analytical Chemistry Credits: 3
- CHEM 351 - Analytical Chemistry Lab Credits: 1
- CHEM 425 - Instrumental Analysis Credits: 3
- CHEM 426 - Instrumental Analysis Laboratory Credits: 1

Mathematics Courses - Credits: 11

- MATH 152 - Elementary Statistics I Credits: 3
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4


## Physics Courses - Credits: 7

- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3


## Philosophy (BA)

## Requirements for the Major - Credits: 24-39

To meet differing needs of students, there are three tracks which students may pursue toward a degree in philosophy.

## Select One of the Following:

## Specialization: Professional Major

A 39-credit major offers an intensive concentration in philosophy. Primarily for students seeking a career in philosophy with the intention of continuing their studies in graduate school.

Required Courses:

- 3 courses which are 300 level or above (exclusive of required courses). (PHIL 101 may be counted only if taken as one of the first three courses in philosophy.)
- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 123 - Ethics Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 331 - Social and Political Philosophy Credits: 3
or
- PHIL 335 - Philosophy of Law and Justice Credits: 3
- PHIL 351 - Philosophy of Natural Science Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3
- PHIL 490 - Independent Study Credits: 1 to 6


## Specialization: Liberal Arts Major

A 30-credit major which encourages students to focus on philosophy tailored to another academic interest in 1) humanities and fine arts 2) social and behavioral sciences 3) natural sciences and mathematics.

A minimum of 3 courses must be taken in each track. (PHIL 101 may be counted only if taken as a first course in philosophy.)

Required Courses:

- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3


## Required for HFA-track

- PHIL 123 - Ethics Credits: 3


## Required for SBS and NSM tracks

One of:

- PHIL 123 - Ethics Credits: 3
- PHIL 324 - Environmental Ethics Credits: 3
- PHIL 325 - Medical/Health Care Ethics Credits: 3
- PHIL 326 - Business Ethics Credits: 3


## Specialization: Career-Related Major

A 24-credit major which allows students to design a program of philosophy courses to complement the student's preparations for a specific career. This is a second major.

The choice of tracks and courses within them should be done in consultation with a member of the philosophy department. Each career track has two further required courses.

Required courses:

- PHIL 113 - Introduction to Logic Credits: 3 or PHIL 313
- PHIL 123 - Ethics Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3 or PHIL 113


## Degree Completion in Four Years Philosophy (BA)

There are many possibilities for degree completion in four years. This is just one sample. Students should consult with advisors.

## Freshman Year - Total Hours: 29

- GERM Credits: 3
- BIOL 100 - Introductory Biology Laboratory Credits: 1
- BIOL 101 - General Biology Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- G\&ES 100 - Discover Geography Credits: 3
- HIST 151 - Ancient and Medieval World Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PHIL 101 - Introduction to Philosophy Credits: 3
- PHIL 113 - Introduction to Logic Credits: 3
- PHIL 123 - Ethics Credits: 3


## Sophomore Year - Total Hours: 30

- ART 225 - Overview of Western Art Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- GERM 102 - German Language and Culture II Credits: 0
- GERM 103 - German Language and Culture III Credits: 0
- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PHIL 163 - Philosophy in Literature Credits: 3
- PHIL 171 - Philosophy of Human Existence Credits: 3
- PHIL 313 - Symbolic Logic Credits: 3
- PHIL 335 - Philosophy of Law and Justice Credits: 3


## Junior Year - Total Hours: 31

- HIST 201 - Colonial America to 1825 Credits: 3
- MATH 225 - Calculus I Credits: 4
- PHIL 140 - World Religions Credits: 3
- PHIL 170 - American Philosophy Credits: 3
- PHIL 353 - Mysticism and Psychical Research Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- WMST 415 - Feminist Perspectives in the Disciplines Credits: 3


## Senior Year - Total Hours: 30

- BIOL 300 - Social and Ethical Issues in Genetics Credits: 3
- CPSC 300 - Challenges of Computer Technology Credits: 3
- ENGL 312 - Shakespeare Credits: 3
- G\&ES 242 - Geography of Religion Credits: 3
- MUSI 105 - Jazz Credits: 3
- PHIL 371 - History of Western Philosophy I Credits: 3
- PHIL 372 - History of Western Philosophy II Credits: 3
- PHIL 490 - Independent Study Credits: 1 to 6
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3


## Physical Education: Teacher Education (BSEd)

## Requirements for the Bachelor of Science in Education

The requirements leading to teacher certification in $\mathrm{K}-12$ health and physical education parallel the accreditation standards and guidelines of the National Association of Sport and Physical Education and of the Pennsylvania Department of Education. The curriculum is designed to prepare future physical education teachers for the challenge of teaching K-12 students about the importance of physical activity and health.

The specific course of study and the requirements leading to teacher certification administered by the Department of Physical Education are available in the departmental office, from the student's advisor, online at www.sru.edu/pe, and from the Teacher Education Policy Manual, available in 105 McKay Education Building and on the College of Education homepage.

The guidelines on admission, professional conduct, and student teaching for this department are subject to change. Current requirements for the College of Education as a whole may be found in the Teacher Education Policy Manual.

## Degree Completion in Four Years Physical Education: Teacher Education (BSEd)

## Completion Hours: 120

## Freshman Year - Total Hours: 32

- Liberal Studies - Credits: 6
- CDEV 248 - Human Development and Education Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
(P see footnotes)
- ENGL 210 - Interpreting Literature Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3

Math 113 or Higher

- PE 107 - Aquatic Fundamentals Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PE 152 - Practical Introduction to Teaching Physical Education Credits: 3
- PE 191 - Foundations of Physical Education Credits: 2
- PE 192 - Diversity Issues in Physical Education Credits: 2


## Sophomore Year - Total Hours: 33

## - Liberal Studies - Credits: 9

- COMM 200 - Public Speaking Credits: 3
(P see footnotes)
- DANC 105 - Dance Fundamentals Credits: 1
- HSAF 262 - Health Foundations Credits: 3
- MATH 113 - Mathematics as a Liberal Art Credits: 3

MATH 113 or higher

- PE 106 - Gymnastics Fundamentals Credits: 3
- PE 202 - Technology for Physical Education Teacher Education Credits: 3
- PE 241 - Outdoor Pursuits Credits: 3
- PE 243 - Movement Education Credits: 2
- PE 274 - Assessment Strategies in Physical Education Credits: 3

Junior Year - Total Hours: 29

- Liberal Studies - Credits: 3
- PE 357 - Territory Activities \& Games (F) Credits: 3
- PE 359 Striking/Fielding Activites \& Games (S) Credits: 2
- ERS 370 - Anat. \& Phys. Bases of Phys. Act. Credits: 3
(A, W, F, S see footnotes)
- ERS 275 - Introduction to Adapted Physical Activity Credits: 3 (A see footnotes)
- HSAF 362 - Introduction to School Health Education Credits: 3
(A, P see footnotes)
- PE 242 - Fitness Education Credits: 3
(P see footnotes)
- PE 352 - Secondary Physical Education Teaching Methods Credits: 3
(A, P see footnotes)
- PE 356 - Net/Wall Activities and Games Credits: 3
- PE 359 - Striking/Fielding Activities and Games Credits: 2
- PE 383 - Motor Development and Learning Credits: 3
(A see footnotes)
Senior Year - Total Hours: 26
- CDEV 342 - Educational Psychology Credits: 3
- HSAF 462 - Teaching and Assessment in Health Education Credits: 3
(A, P see footnotes)
- PE 358 - Lifetime/Leisure Activities and Games Credits: 3
- PE 452 - Elementary Physical Education Methods Credits: 3
(A, P see footnotes)
- PE 455 - Student Teaching - Physical Education Credits: 12
(A see footnotes)
- PE 468 - Senior Seminar in Physical and Health Education Teacher Education Credits: 2
(A, P see footnotes)


## Footnotes

$(\mathrm{P})=$ Prerequisite Required
$(A)=$ Acceptance to Teacher Certification Required
$(W)=$ Waiver from Liberal Studies Hours
$(S)=$ Offered Spring Semester Only
(F) = Offered Fall Semester Only

## Physical Therapy 3 + 3 - Biology (BS)

The Biology Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Only Slippery Rock University students are eligible for this $3+3$ option.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)
The curriculum requires each student to choose a facet of the profession to explore including one of the following areas servicelearning, specialty care, administration, research or teaching.


## Degree Completion in Six Years Biology (BS)

Freshman Year - Total Hours: 35

- Liberal Studies/Elective Credits: 10
- BIOL 104 - Principles of Biology Credits: 4
- BIOL 201 - General Botany Credits: 4
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3


## Sophomore Year - Total Hours: 29

- Liberal Studies/Elective Credits: 6
- BIOL 212 - General Zoology Credits: 4
- BIOL 250 - Genetics Credits: 4
- CHEM 201 - Organic Chemistry I Credits: 3
- CHEM 202 - Organic Chemistry II Credits: 3
- CHEM 211 - Organic Chemistry Laboratory I Credits: 1
- CHEM 212 - Organic Chemistry Laboratory II Credits: 1
- COMM 200 - Public Speaking Credits: 3
- MATH 225 - Calculus I Credits: 4

Junior Year - Total Hours: 34

- Liberal Studies/Elective Credits: 12
- BIOL 325 - Biometry Credits: 3
- BIOL 330 - Microbiology Credits: 3
- BIOL 340 - Vertebrate Anatomy Credits: 3
- BIOL 410 - Animal Physiology Credits: 3
- CHEM 335 - Biochemistry Credits: 3
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Senior Year

DEFINED BY THE DPT PROGRAM

## Physical Therapy 3+3-Exercise Science (BS)

The Exercise and Rehabilitative Sciences Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3 - Exercise Science (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one "W" in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University students are eligible for this $3+3$ option.
If any of these requirements are not met, the $3+3$ designation will be removed from the student's record by your faculty advisor.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)
The curriculum requires each student to choose a facet of the profession to explore including one of the following areas servicelearning, specialty care, administration, research or teaching.


## Degree Completion in Six Years Exercise Science (BS)

## Freshman Year - Total Hours: 33

- Liberal Studies Credits: 13
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- ERS 100 - Introduction to Exercise Science: Careers and Content Credits: 3
- ERS 264 - Applied Anatomy Credits: 3


## Sophomore Year - Total Hours: 35

- Math Credits: 3
- Liberal Studies Credits: 6
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- COMM 200 - Public Speaking Credits: 3
- ERS 273 - Measurement and Statistical Application in Exercise Science Credits: 3
- ERS 375 - Exercise Physiology I Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5
- PSYC 105 - Introduction to Psychology Credits: 3

Junior Year - Total Hours: 36

- PYSC Credits: 3
- Liberal Studies Credits: 3
- ERS 321 - Care and Prevention of Injuries of the Physically Active Credits: 3
- ERS 351 - Biomechanics Credits: 3
- ERS 376 - Exercise Leadership: Group Fitness Credits: 3
- ERS 377 - Exercise Leadership: Strength Fitness Credits: 3
- ERS 474 - Physical Fitness Assessment and Instrumentation Credits: 3
- ERS 475 - Exercise Physiology II Credits: 3
- ERS 484 - Exercise Prescription Credits: 3
- ERS 493 - Exercise Science: Senior Synthesis Credits: 3
- ERS 561 - Worksite Wellness Promotion Credits: 3
- HSAF 424 - Nutrition and Exercise Credits: 3

Senior Year

DEFINED BY THE DPT PROGRAM

## Physical Therapy 3 + 3 - Health Science (Community Health) (BS)

The Health and Safety Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3-Health Science (Community Health) (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one "W" in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University student's are eligible for this $3+3$ option.
If any of these requirements are not met, the $3+3$ designation will be removed from the students record by your faculty advisor.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)
The curriculum requires each student to choose a facet of the profession to explore including one of the following areas servicelearning, specialty care, administration, research or teaching.


## Degree Completion in Six Years Health Science (Community Health) (BS)

## Freshman Year - Total Hours: 31

- Liberal Studies Credits: 6
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 210 - Introduction to Community Health Credits: 3
- MATH 125 - Precalculus Credits: 4
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 100 - Psychology Applied Credits: 3
or
- PSYC 105 - Introduction to Psychology Credits: 3


## Sophomore Year - Total Hours: 29

- Liberal Studies Credits: 6
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HSAF 262 - Health Foundations Credits: 3
- HSAF 314 - Nutrition and Health Credits: 3
- PSYC 240 - Human Sexual Behavior Credits: 3
or
- PSYC 300 - Psychology of Gender Credits: 3
or
- PSYC 338 - Cognitive Psychology Credits: 3
or
- PSYC 344 - Developmental Psychology Credits: 3
or
- PSYC 377 - Social Psychology Credits: 3

Junior Year - Total Hours: 30

- Liberal Studies/Electives Credits: 7
- HSAF 301 - Introduction to Health Education Credits: 3
- HSAF 309 - Introduction to the Study of Disease Credits: 3
- HSAF 312 - Data Management for Health Science Credits: 3
- HSAF 313 - Biostatistics Credits: 3
- HSAF 410 - Epidemiology Credits: 3
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5

Senior Year

## Physical Therapy 3 + 3 - Safety and Environmental Management (BS)

The Health and Safety Department offers a 3+3 option for students interested in a career in physical therapy. Undergraduate students work with their academic advisor to complete the courses needed to fulfill the requirements for both an undergraduate degree and the entrance requirements for the Doctor of Physical Therapy program.

The first year of the Doctor of Physical Therapy (DPT) meets the requirements for the fourth year of the undergraduate degree. Approved undergraduate majors in Biology, Health and Safety, and Exercise Science are also available for the $3+3$ option. Other majors can be used to pursue the DPT, but students cannot apply until after completing their undergraduate degree and they, too, must meet all DPT admission criteria.

Requirements for the Physical Therapy 3+3 - Safety and Environmental Management (BS):

- Student must maintain a 3.0 or higher overall QPA.
- Student may not have more than one "W" in a required course in the $3+3$ block.
- Student can only be in the $3+3$ program for a maximum of three (3) years full-time continuous enrollment.
- Only Slippery Rock University student's are eligible for this 3+3 option.
If any of these requirements are not met, the $3+3$ designation will be removed from the students record by your faculty advisor.

Only Slippery Rock University students are eligible for this $3+3$ option.

Highlights of the DPT Program at Slippery Rock University:

- Program is eight semesters in length, three academic years plus two summers.
- Strong foundation in basic sciences, including two semesters of cadaver anatomy, neuroscience, and pathophysiology.
- Four semesters of research curriculum.
- Two semesters of clinical internships each one semester in length.
- Two shorter clinical education experiences.
- Success on state board examination exceeds state and national average.
- Opportunities for graduate assistantships.
- Dedicated PT building 45,000 square feet
- Accredited by the Commission on Accreditation of Physical Therapy Education (CAPTE)
The curriculum requires each student to choose a facet of the profession to explore including one of the following areas servicelearning, specialty care, administration, research or teaching.


## Degree Completion in Six Years Safety and Environmental Management (BS)

Freshman Year - Total Hours: 30

- Liberal Studies/Electives Credits: 9
- BIOL 216 - Anatomy and Physiology Credits: 3
- BIOL 217 - Anatomy and Physiology Credits: 3
- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HSAF 118 - Introduction to Safety Credits: 3
- MATH 152 - Elementary Statistics I Credits: 3
- PSYC 100 - Psychology Applied Credits: 3
or
- PSYC 105 - Introduction to Psychology Credits: 3


## Sophomore Year - Total Hours: 29

- Liberal Studies Credits: 6
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- COMM 200 - Public Speaking Credits: 3
- ENGL 210 - Interpreting Literature Credits: 3
- HSAF 218 - Hazard Analysis and Legislative Compliance Credits:

3

- HSAF 338 - Ergonomics and Human Factors Credits: 3

One of the Following Courses

- PSYC 240 - Human Sexual Behavior Credits: 3
- PSYC 300 - Psychology of Gender Credits: 3
- PSYC 338 - Cognitive Psychology Credits: 3
- PSYC 344 - Developmental Psychology Credits: 3
- PSYC 377 - Social Psychology Credits: 3

Junior Year - Total Hours: 31

- Liberal Studies/Electives Credits: 7
- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 - Comprehensive Emergency Management and Fire Services Credits: 3
- HSAF 368 - Injury and Damage Incidents Evaluation Credits: 3
- HSAF 448 - Management and Integration of Safety Credits: 3
- MATH 125 - Precalculus Credits: 4
- PHYS 201 - Elements of Physics I Credits: 3
- PHYS 202 - Elements of Physics II Credits: 5


## Senior Year

## DEFINED BY THE DPT PROGRAM

## Physics (BA)

Physicists study the world around us in order to discover the basic principles or laws which govern the natural world. As a physicist you can:

- Seek to understand the origin of the universe and the ultimate structure of matter;
- Study the principles underlying the structure of materials in order to design faster computer chips or improved liquid crystals used for electronic displays;
- Work in hands-on lab courses studying laser-based optics, learn electronic instrumentation for the physical sciences including the computer acquisition and analysis of data, and use modern lab equipment such as the electron spin resonance spectrometer which can detect the radiation from individual atoms;
- Acquire the theoretical and experimental background for work in areas such as acoustics, astrophysics, biophysics, chemical physics, computer science, education mathematical physics, and engineering. Developments in science and technology move very fast and a degree in physics provides you with the fundamental tools, which you will need in order to attack the scientific and technological problems of this millennium.

An undergraduate degree in Physics gives students a broad, deep, rigorous understanding to solve many types of quantitative problems, a skill which is useful to many different careers in computers, engineering, finance, etc. With the rapid and unpredictable pace and direction of technological advance, training in physics gives the undergraduate their most important skill, namely the ability to think clearly and rigorously about a technical problem which may arise in the workplace.

## Requirements for the Major - Credits: 39

A language is required of all BA majors.

## Required Courses - Credits: 19

- PHYS 212 - General Physics II Credits: 4
- PHYS 213 - General Physics III Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4


## Elective Physics - Credits: Select 6

- PHYS 315 - Engineering Mechanics II: Dynamics Credits: 3
- PHYS 325 - Analog \& Digital Electronics Credits: 3
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 480 - Quantum Credits: 3
- PHYS/CHEM 301 - Physical Chemistry I Credits: 3


## Related Field Work - Credits: 14

- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3


## A Language is Required of all BA Majors

## Specialization: Engineering

See the Pre-professional Programs section.

## Degree Completion in Four Years Physics (BA)

## Completion Hours: 120

Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 11
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 16
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- PHYS 212 - General Physics II Credits: 4

Junior Year - Total Hours: 30

- Liberal Studies - Credits: 15
- Modern Languages - Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4


## Senior Year - Total Hours: 30

- PHYS Elective - Credits: 6
- Modern Language - Credits: 6
- Electives - Credits: 15
- Liberal Studies - Credits: 3


## Physics (BS)

Physicists study the world around us in order to discover the basic principles or laws which govern the natural world. As a physicist you can:

- Seek to understand the origin of the universe and the ultimate structure of matter;
- Study the principles underlying the structure of materials in order to design faster computer chips or improved liquid crystals used for electronic displays;
- Work in hands-on lab courses studying laser-based optics, learn electronic instrumentation for the physical sciences including the computer acquisition and analysis of data, and use modern lab equipment such as the electron spin resonance spectrometer which can detect the radiation from individual atoms;
- Acquire the theoretical and experimental background for work in areas such as acoustics, astrophysics, biophysics, chemical physics, computer science, education mathematical physics, and engineering. Developments in science and technology move very fast and a degree in Physics provides you with the fundamental tools, which you will need in order to attack the scientific and technological problems of this millennium.

An undergraduate degree in Physics gives students a broad, deep, rigorous understanding to solve many types of quantitative problems, a skill which is useful to many different careers in computers, engineering, finance, etc. With the rapid and unpredictable pace and direction of technological advance, training in physics gives the undergraduate their most important skill, namely the ability to think clearly and rigorously about a technical problem which may arise in the workplace.

## Requirements for the Major - Credits: 57

Required Courses - Credits: 30

- PHYS 212 - General Physics II Credits: 4
- PHYS 213 - General Physics III Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 371 - Physical Optics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2 (must take twice)
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 411 - Modern Physics Credits: 4
- PHYS 480 - Quantum Credits: 3


## Elective Physics - Credits: Select 6

- PHYS 315 - Engineering Mechanics II: Dynamics Credits: 3
- PHYS 325-Analog \& Digital Electronics Credits: 3
- PHYS/CHEM 301 - Physical Chemistry I Credits: 3


## Related Field Work - Credits: 21

- CHEM 108 - General Chemistry II Credits: 3
- CHEM 112 - General Chemistry II Lab Credits: 1
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- MATH 301 - Differential Equations I Credits: 3


## Degree Completion in Four Years Physics (BS)

## Completion Hours: 120

## Freshman Year - Total Hours: 30

- Liberal Studies - Credits: 7
- CHEM 107 - General Chemistry I Credits: 3
- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I Lab Credits: 1
- CHEM 112 - General Chemistry II Lab Credits: 1
- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 211 - General Physics I Credits: 4
- PHYS 213 - General Physics III Credits: 3

Sophomore Year - Total Hours: 30

- Liberal Studies - Credits: 16
- CPSC 140 - Introduction to Programming Principles Credits: 3
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and Differential Equations Credits: 3
- PHYS 212 - General Physics II Credits: 4

Junior Year - Total Hours: 30

- PHYS Electives - Credits: 6
- Liberal Studies - Credits: 9
- MATH 301 - Differential Equations I Credits: 3
- PHYS 314 - Engineering Mechanics I: Statics Credits: 3
- PHYS 331 - Mathematical Methods of Physics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 411 - Modern Physics Credits: 4


## Senior Year - Total Hours: 30

- Liberal Studies - Credits: 19
- PHYS 371 - Physical Optics Credits: 3
- PHYS 381 - Advanced Physics Laboratory Credits: 2
- PHYS 410 - Electricity and Magnetism Credits: 3
- PHYS 480 - Quantum Credits: 3


## Political Science (BA)

Are you interested in American politics? International affairs? Critical issues such as health, the environment, civil rights? Theories concerning the ideal government and how power and resources are allocated in society? Do you want to study these subjects and pursue a career based on your interest? If so, you should consider studying political science.

Political science students enjoy a versatility of skills and a marvelous range of exciting careers in federal, state and local governments; law; business; international organizations; nonprofit associations and organizations; campaign management and polling; journalism; precollegiate education; electoral politics; research and university and college teaching.

Members of the department assist students in developing a philosophy of life, acquiring meaningful civic roles, and learning the skills that are basic to political, social, and economic success. The preparation of students for continuous civic involvement, responsible citizenship in the academic community is encouraged through participation in department and university affairs. Students are encouraged to participate in the Model United Nations programs. Other organizations include Amnesty International, which takes responsibility of the university's Holocaust Remembrance programs. Students also have the opportunity to participate in Law Career Day conferences and travel and study abroad. Practical experience in politics is provided through class activities and the internship
program that involves students in the work-a-day worlds of local communities, as well as state and national governments and businesses in Harrisburg and Washington, D.C.

## Requirements for the Major - Credits: 36

## Candidates for the Bachelor of Arts in Political Science Degree are Required:

- to complete 36 credit hours of course work
- to complete courses in five of the seven areas listed below.
- to complete POLS 101 and one additional course in the American Political Institutions block.
- to complete POLS 105 and one additional course in the Political Theory and Thought block.
- to complete either POLS 103 or POLS 263 and one additional course in the block associated with the course elected.
- to complete POLS 310, Research Methods.
- to complete 18 hours in political science at the 300 or 400 level.
- to complete $40 \%$ of the total number of hours counted towards graduation at the 300 or 400 level. (In order to accomplish this, students are strongly urged to use 300 or 400 level courses to complete their liberal studies enrichment courses.)


## In Addition, Students:

- may complete an internship, POLS 450, of up to twelve hours, but not more than six of those hours may count toward the minimum requirement of thirty-six hours for completion of the major. Alternatively a student might complete the Harrisburg Internship Program, Pols 451, 452 , and 454; but, again not more than six of those hours may count toward the minimum requirement of thirty-six hours for the completion of the major.
- may elect to take as many elective courses beyond the required minimums as they choose, but not more than fifteen hours in any one block may count toward the minimum requirement of thirty-six hours for completion of the major.
- earning a bachelor of arts degree must demonstrate a competency at the equivalent of the 103 level in a foreign language.

American Political Institutions:

- POLS 101 - American National Government Credits: 3
- POLS 200 - State and Local Government Credits: 3
- POLS 300 - Intergovernmental Relations

Credits: 3

- POLS 321 - The Presidency Credits: 3
- POLS 323 - The Courts Credits: 3
- POLS 325 - The Congress Credits: 3


## Political Behavior:

- POLS 310 - Research Methods Credits: 3
- POLS 327 - Public Opinion and Political Attitudes Credits: 3
- POLS 329 - Political Learning Credits: 3
- POLS 333 - The Political Film Credits: 3
- POLS 360 - Parties and Elections Credits: 3
- POLS 375 - Women and Politics Credits: 3

Political Theory \& Thought:

- POLS 105 - Introducation to Political Theory Credits: 3
- POLS 341 - Classical Political Thought Credits: 3
- POLS 343 - Modern Political Thought Credits: 3
- POLS 345 - Contemporary Political Thought Credits: 3
- POLS 349 - Utopian Experiments: Issues of Gender and Power Credits: 3


## International Relations \& Politics:

- POLS 103 - International Relations Credits: 3
- POLS 220 - Foreign Policy Credits: 3
- POLS 322 - The United Nations and International Law Credits: 3
- POLS 365 - International Political Economy Credits: 3
- POLS 367 - National and International Security: Problems and Issues Credits: 3


## Comparative Politics:

- POLS 263 - Introduction to Comparative Politics Credits: 3
- POLS 331 - Japanese Politics and Culture Credits: 3
- POLS 366 - Introduction to Chinese Politics Credits: 3
- POLS 369 - Politics of Developing Areas Credits: 3
- POLS 371 - Politics, Development and Security in East Asia Credits: 3


## Public Policy \& Law:

- POLS 202 - Politics of Law Enforcement

Credits: 3

- POLS 224 - Civil Liberties Credits: 3
- POLS 253 - Administrative Law Credits: 3
- POLS 255 - Introduction to Public Policy

Credits: 3

- POLS 324 - Environmental Law and Policy

Credits: 3

- POLS 340 - The Historical and Political

Legacies of the Vietnam Era Credits: 3

- POLS 348 - The Holocaust: Genocide and Political Violence Credits: 3
- POLS 359 - Policy Analysis and Evaluation Credits: 3
- POLS 403 - Constitutional Law Credits: 3


## Public Administration and <br> Service:

- POLS 111 - Grassroots Democracy Credits: 3
- POLS 151 - Introduction to Public

Administration Credits: 3

- POLS 232 - Nonprofit Management Credits: 3
- POLS 280 - Community Development Credits:

3

- POLS 305 - Ethical Practice in Public

Administration Credits: 3

- POLS 311 - Quantitative Techniques Credits: 3
- POLS 330 - Managing Community Resources Credits: 3
- POLS 353 - Resource Development and Grant Writing Credits: 3
- POLS 455 - The Politics of National Service and Civil Society Credits: 3


## Degree Completion in Four

Years Political Science (BA)

## Completion Hours: 120

## Freshman Year - Total Hours: 29

- ENGL 101 - College Writing I Credits: 3
- ENGL 103 - College Writing II Credits: 3
- HIST 153 - Twentieth Century World Credits:

3

- MATH 113 - Mathematics as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PE 149 - Tennis Credits: 1
- PHIL 101 - Introduction to Philosophy Credits:

3

- POLS 101 - American National Government Credits: 3
- POLS 103 - International Relations Credits: 3
- SPAN 101 - Spanish Language \& Culture I Credits: 3
- THEA 141 - Introduction to the Theatre Credits: 3


## Sophomore Year - Total Hours:

30

- COMM 200 - Public Speaking Credits: 3
- EGEO 100 - Environmental Geology Credits:

3

- ENGL 210 - Interpreting Literature Credits: 3
- ENGL 243 - Literature of the Women's Movement Credits: 3
- G\&ES 105 - World Regional Geography

Credits: 3

- HIST 203 - U.S. History Since 1900 Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- POLS 105 - Introducation to Political Theory

Credits: 3

- SPAN 102 - Spanish Language \& Culture II Credits: 3
- SPAN 103 - Spanish Language \& Culture III Credits: 3

Junior Year - Total Hours: 31

- Electives - Credits: 12
- BIOL 101 - General Biology Credits: 3
+ Lab
- ECON 201 - Pinciples of Macroeconomics Credits: 3
- HIST 340 - The Historical and Political

Legacies of the Vietnam Era Credits: 3

- PHIL 331 - Social and Political Philosophy

Credits: 3

- POLS 310 - Research Methods Credits: 3
- POLS 331 - Japanese Politics and Culture

Credits: 3
Senior Year - Total Hours: 30

- Electives - Credits: 12
- POLS 450 - Credits: 6
- POLS 343 - Modern Political Thought Credits:

3

- POLS 348 - The Holocaust: Genocide and

Political Violence Credits: 3

- POLS 367 - National and International

Security: Problems and Issues Credits: 3

- POLS 403 - Constitutional Law Credits: 3


## Pre-engineering

327 Vincent Science Hall
724-738-2074

In a cooperative program with the Pennsylvania State University (PSU) or Youngstown State University (YSU), the pre-engineering student undertakes a three-year curriculum in liberal studies and natural sciences (physics, mathematics, chemistry, geology) at SRU and a two-year engineering curriculum at PSU or YSU. A student recommended for transfer by SRU's Department of Physics will be able to enter any one of the following areas of study at PSU:

Aerospace Engineering
Agricultural and Biological Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Engineering Science
Geo-Environmental Engineering
Industrial Engineering
Material Science and Engineering
Mechanical Engineering
Mining Engineering
Nuclear Engineering
Petroleum and Natural Gas Engineering
and at YSU:

Chemical Engineering
Civil \& Environmental Engineering
Electrical \& Computer Engineering
Engineering Technology (Civil \& Construction, Electrical, Mechanical)
Industrial \& Systems Engineering
Mechanical Engineering
The cooperative program is an effort to fulfill the following objectives:

- To cooperatively provide a general education in liberal arts and sciences, as well as engineering education for each student enrolled so that through five years of study a student may complete what otherwise could require six or more years.
- To provide a student who has not yet decided between engineering and other disciplines, additional time to make that decision while the student studies both arts and sciences during the first three years at Slippery Rock University.
- To enable qualified students to receive both a liberal and technical education at relatively low cost and, in doing so, provide the commonwealth and the nation with more broadly educated engineers.


## Requirements for the

 Major - Credits: 61
## Specialization: Preengineering

## Required Courses:

(PHYS 315 is not required of chemical engineering, electrical engineering, material science and engineering, nuclear engineering, and petroleum and natural gas engineering students. All other students must choose an alternative course from the list of preengineering electives if PHYS 315 is not taken. Physics 411 is only required of students intending to enroll in aerospace, computer, electrical, or
nuclear engineering. All other students must choose an alternate course from the list of pre-engineering electives if PHYS 411 is not taken.)

- PHYS 140 - Engineering Graphics I Credits: 2
- PHYS 141 - Engineering Graphics II Credits: 1
- PHYS 211 - General Physics I

Credits: 4

- PHYS 212 - General Physics II

Credits: 4

- PHYS 213 - General Physics III

Credits: 3

- PHYS 314 - Engineering Mechanics

I: Statics Credits: 3

- PHYS 315 - Engineering Mechanics

II: Dynamics Credits: 3

- PHYS 331 - Mathematical Methods of Physics Credits: 3


## Related Field Work

- CHEM 107 - General Chemistry I

Credits: 3

- CHEM 108-General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I

Lab Credits: 1

- CHEM 112 - General Chemistry II

Lab Credits: 1

- CHEM 201 - Organic Chemistry I

Credits: 3
(Chemical Engineers Only)

- CHEM 202-Organic Chemistry II Credits: 3
(Chemical Engineers Only)
- CPSC 140 - Introduction to

Programming Principles Credits: 3

- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and

Differential Equations Credits: 3

- MATH 301 - Differential Equations I

Credits: 3

## Engineering Electives

(3 credit hours absolute
minimum. Two additional courses
must be taken if PHYS 315 and PHYS
411 are not taken.)

- Language Courses 101 and/or 102
(Language courses are optional, but may be taken in lieu of other engineering elective courses)
- CPSC (additional upper-division course)
- Independent Study (Restricted to topics in physics and computer science)
- EGEO 101 - Physical Geology

Credits: 3
(Recommended for civil, mining, or petroleum engineers.)

- EGEO 102 - Historical Geology Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 111 - Physical Geology Lab Credits: 1
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 112 - Historical Geology Lab Credits: 1
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 201 - Earth Materials Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- EGEO 327 - Structural Geolgoy

Credits: 3
(Recommended for civil, mining, or petroleum engineers.)

- EGEO 360 - Introduction to Hydrology Credits: 3
(Recommended for civil, mining, or petroleum engineers.)
- ENGL 205 - Technical and Scientific Writing Credits: 3
(Prerequisite: English 103)
- MATH 315 - Numerical

Mathematics Credits: 3

- MATH 352 - Mathematical Statistics

I Credits: 3
(Required for mechanical engineers)

- PHYS 325 - Analog \& Digital

Electronics Credits: 3

- PHYS 371 - Physical Optics Credits:

3

- PHYS 381 - Advanced Physics

Laboratory Credits: 2

- PHYS 410 - Electricity and

Magnetism Credits: 3

- PHYS 480 - Quantum Credits: 3
- PHYS/CHEM 301 - Physical

Chemistry I Credits: 3

## Liberal Studies Requirements - Credits:

38

- Basic Requirements
- The Arts
- Global Community (An economics course is required at PSU and may be taken at SRU.)
- Human Institutions and Interpersonal Relations
- Challenges of the Modern Age (the requirements in this block were waived by the University Curriculum Committee.)


## Intensive Writing

## Courses

Intensive Writing Courses (Two intensive writing courses are required, but they may also count in the liberal studies blocks or major)

Degree Completion in Five Years Physics (BA)
(SRU Portion of 3 + 2 Program)

Freshman Year - Total
Hours: 34

- Liberal Studies - Credits: 7
- CPSC 140 - Introduction to

Programming Principles Credits: 3

- ENGL 101 - College Writing I

Credits: 3

- ENGL 103 - College Writing II

Credits: 3

- MATH 225 - Calculus I Credits: 4
- MATH 230 - Calculus II Credits: 4
- PHYS 140 - Engineering Graphics I

Credits: 2

- PHYS 141 - Engineering Graphics II

Credits: 1

- PHYS 211 - General Physics I

Credits: 4

- PHYS 213-General Physics III

Credits: 3

## Sophomore Year - Total

Hours: 32

- Liberal Studies - Credits: 7
- CHEM 107 - General Chemistry I

Credits: 3

- CHEM 108 - General Chemistry II Credits: 3
- CHEM 111 - General Chemistry I

Lab Credits: 1

- CHEM 112 - General Chemistry II

Lab Credits: 1

- COMM 200 - Public Speaking

Credits: 3

- ENGL 210 - Interpreting Literature

Credits: 3

- MATH 231 - Calculus III Credits: 4
- MATH 240 - Linear Algebra and

Differential Equations Credits: 3

- PHYS 212 - General Physics II

Credits: 4

## Junior Year - Total Hours:

30

- Liberal Studies - Credits: 12
- PHYS Elective - Credits: 9
- MATH 301 - Differential Equations I

Credits: 3

- PHYS 314 - Engineering Mechanics

I: Statics Credits: 3

- PHYS 331 - Mathematical Methods of Physics Credits: 3


## Senior Year - Credits from Penn State or YSU

Senior Year Credits from Penn State or YSU

## Pre-Law

For the past two decades, faculty members in political science and philosophy have taken the lead in advising the majority of SRU's future attorneys. While law schools have advised us that students may prepare for the study of law through a variety of academic majors or programs, students interested in legal education will benefit from seeking the advice of faculty with experience in counseling the many students who have successfully gone on to law school and the practice of law from Slippery Rock University.

Students at Slippery Rock University have succeeded at law schools across the country, including Fordham, Georgetown, Emory, Maryland, American, Florida, Temple, Syracuse, as well as Harvard and Yale. In almost any given year, SRU students who have worked with our program advisors will also be attending regional programs at the University of Pittsburgh, Duquesne, and Penn State, Dickenson.

Students who are interested in preparing for a legal education and pursuing a career in law are strongly encouraged to make appointments and speak with Dr. Richard Martin 724 738-2434 or Dr. Walter Powell 724-738-2432 in the Department of Political Science, located in the Spotts World Culture Building. These faculty members will work with students to design a course of studies suited to individual interests and needs. This
service is intended for all students regardless of major.

## Pre-medical, -dental, -veterinary, optometry, chiropractic, Pharmacy, and podiatry

123 Vincent Science Hall 724-738-2023

Students interested in these preprofessional programs are requested to contact the chairperson of the Department of Biology. These professional schools do not generally indicate a preference for a particular major. However, they do encourage students to have a liberal arts background with an ability to communicate and a strong concentration in the sciences. Students are advised to take at least one year of biology coursework, two years of chemistry (two semesters of general chemistry and two semesters of organic chemistry), one year of physics, and mathematics through calculus

## Pre-metrology

327 Vincent Science Hall 724-738-2074

Metrology is the science of measurement. Metrologists develop and evaluate calibration systems that measure characteristics of physical objects, substances, or phenomena. Quantities measured include mass, length, time, temperature, electric current, luminous intensity, and other derived units of physical or chemical measure. Metrologists also develop calibration methods and techniques based on the techniques of
measurement science, technical analysis of measurement problems, and accuracy and precision requirements. Metrologists are typically employed in research laboratories, government agencies, the military, and private industry.

Slippery Rock University and Butler County Community College offer a joint cooperative program in Metrology and Physics. This cooperative program has the following major objectives.

- To provide cooperatively a general education in a liberal arts institution, as well as technical education in a specialized school for each student enrolled so that through four years of study, a student may complete what otherwise could require five or more years.
- To allow those qualified students to receive both a liberal and technical education at relatively low costs and, in so doing, provide the Commonwealth and the Nation with more broadly educated scientists. Students can choose from two programs offered. Butler County Community College students enrolled in the metrology program can complete their AAS. degree and then transfer to Slippery Rock University in order to complete a BS or BA degree in physics. For the typical student, this transfer will comprise a 2-2 program, with two years spent at Butler County Community College and two years at Slippery Rock University. Students successfully completing this program will be awarded two degrees. Slippery Rock
University students enrolled in the BA degree physics program can complete their
undergraduate studies in the metrology program at Butler County Community College. For a typical student, this transfer will comprise a 3-1 program, with three years spent at Slippery Rock University and one year at Butler County Community College. Students successfully completing this program will be awarded two degrees: a BA in physics from Slippery Rock University and an AAS in metrology from Butler County Community College.

Specific plans of study and other metrology program details can be obtained by contacting the chair of the physics department in room 327 Vincent Science Hall.

## Psychology

(BA)

## Requirements for the Major -

Credits: 36

## Required Core

Courses - Credits:
13

- PSYC 105 - Introduction
to Psychology Credits: 3
- PSYC 221 - Research

Methods and Statistical
Applications I Credits: 3

- PSYC 303 - Learning

Credits: 3
or PSYC 338

- PSYC 325 - Introduction to Experimental Psychology Credits: 3
- PSYC 326 - Experimental

Psychology Laboratory Credits: 1

- PSYC 338 - Cognitive

Psychology Credits: 3
or PSYC 303

## Core Electives

Other courses are selected in consultation with the advisor from the Department of Psychology.

A minimum of 4 courses from the following:

- PSYC 276 - Abnormal

Behavior Credits: 3

- PSYC 306 - Introduction
to Pyschological Testing
Credits: 3
- PSYC 311 - Physiological

Psychology Credits: 3

- PSYC 344 -

Developmental Psychology
Credits: 3

- PSYC 360 - History of

Psychology Credits: 3

- PSYC 377 - Social

Psychology Credits: 3

## Degree

Completion in
Four Years
Psychology (BA)

Completion Hours: 120
Freshman Year -
Total Hours: 30

- Liberal Studies/Elective

Credits: 21

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year Total Hours: 30

- Liberal Studies/Elective

Credits: 17

- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- PSYC 221 - Research

Methods and Statistical
Applications I Credits: 3

- PSYC 325 - Introduction
to Experimental Psychology
Credits: 3
- PSYC 326 - Experimental

Psychology Laboratory
Credits: 1

Junior Year - Total
Hours: 30

- Liberal Studies/Elective

Credits: 12

- Modern Languages

Credits: 6
A minimum of 4 course from the following:

- PSYC 276 - Abnormal

Behavior Credits: 3
or

- PSYC 306 - Introduction
to Pyschological Testing
Credits: 3
or
- PSYC 311 - Physiological

Psychology Credits: 3
or

- PSYC 344 -

Developmental Psychology Credits: 3
or

- PSYC 360 - History of Psychology Credits: 3
or
- PSYC 377 - Social

Psychology Credits: 3

## Senior Year - Total

Hours: 30

- PSYC Elective Credits: 12
- Modern Languages: 3
- Liberal Studies/Elective

Credits: 12

- PSYC 303 - Learning Credits: 3
or
- PSYC 338 - Cognitive

Psychology Credits: 3

## Psychology (BS)

## Requirements for the Major -

Credits: 42

Required Core
Courses - Credits:
16-19

- PSYC 105 - Introduction
to Psychology Credits: 3
- PSYC 221 - Research

Methods and Statistical
Applications I Credits: 3

- PSYC 303 - Learning

Credits: 3
or PSYC 338

- PSYC 325 - Introduction
to Experimental Psychology
Credits: 3
- PSYC 326 - Experimental

Psychology Laboratory
Credits: 1

- PSYC 338 - Cognitive

Psychology Credits: 3
or PSYC 303

- PSYC 420 - Community

Service Practicum in
Psychology Credits: 3
or

- PSYC 430 - Research

Practicum in Psychology Credits: 3
or

- PSYC 450 - Psychology Internship Credits: 6


## Core Electives

Other courses are selected in consultation with the advisor from the Department of Psychology.

A minimum of 4 courses from the following:

- PSYC 276 - Abnormal

Behavior Credits: 3

- PSYC 306 - Introduction
to Pyschological Testing
Credits: 3
- PSYC 311 - Physiological

Psychology Credits: 3

- PSYC 344 -

Developmental Psychology
Credits: 3

- PSYC 360 - History of

Psychology Credits: 3

- PSYC 377 - Social

Psychology Credits: 3

## Degree

Completion in
Four Years
Psychology (BS)

Completion Hours: 120
Freshman Year -
Total Hours: 30

- Liberal Studies/Electives

Credits: 21

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- PSYC 105 - Introduction to Psychology Credits: 3

Sophomore Year Total Hours: 30

- Liberal Studies/Elective

Credits: 17

- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- PSYC 221 - Research

Methods and Statistical
Applications I Credits: 3

- PSYC 325 - Introduction
to Experimental Psychology
Credits: 3
- PSYC 326 - Experimental

Psychology Laboratory
Credits: 1

Junior Year - Total
Hours: 30

- Liberal Studies/Elective

Credits: 18
A minimum of 4 courses from the following:

- PSYC 276 - Abnormal

Behavior Credits: 3
or

- PSYC 306 - Introduction
to Pyschological Testing
Credits: 3
or
- PSYC 311 - Physiological

Psychology Credits: 3
or

- PSYC 344 -

Developmental Psychology Credits: 3
or

- PSYC 360 - History of

Psychology Credits: 3
or

- PSYC 377 - Social

Psychology Credits: 3

## Senior Year - Total

Hours: 30

- PSYC Elective Credits: 12-

15

- Liberal Studies/Elective Credits: 9
- PSYC 303 - Learning

Credits: 3
or

- PSYC 338 - Cognitive

Psychology Credits: 3

- PSYC 420 - Community

Service Practicum in
Psychology Credits: 3
or

- PSYC 430 - Research

Practicum in Psychology
Credits: 3
or

- PSYC 450 - Psychology

Internship Credits: 6

## Regional

Learning Alliance

850 Cranberry Woods Drive
Cranberry Township, PA
724-741-1018
The primary purpose of the educational alliance is to efficiently and effectively meet the training and educational needs of the businesses and industries within a two-hour radius of Northern Allegheny County. Slippery Rock University will serve as the facility manager and broker educational services to match business, industry and community needs with the best available educational provider.

By collaborating rather than competing, educational
providers make better utilization of their talents and resources. By consolidating rather than fragmenting, business and industry can save time and resources in finding the best answer to their workforce needs. By offering a comprehensive set of services under one roof, both providers and clients have available a range of services and options otherwise impossible from any single provider. Slippery Rock University positions the Regional Learning Alliance to be the resource magnet to serve regional workforce development demands within one of the fastest growing markets in Pennsylvania.

The facility is an "educational mall;" a highly adaptive multifunctional full service training facility providing auxiliary services such as career center, conference center, child-care, manufacturing development center, and other needed support services. The center operates on an extended schedule - days, evenings, and weekends. Most importantly, the educational alliance operates on a principle of customer service that promotes rapid response to community and business needs including rapid transformation of training areas.

## Safety and

## Environmental

Management
(BS)

Coordinator<br>Joseph Cali

"The education and support I received from the faculty in the Slippery Rock
University's safety and environmental management major was excellent! The major contained top notch classroom education and a practical real world internship that enabled myself and other alumni to be extremely marketable to employers."

Angela Mattis, ${ }^{\mathbf{9} 7}$
innovative approaches in the establishment and direction of comprehensive occupational safety programs in educational, governmental, and private business and industrial enterprises. The curriculum is aimed at assuring understanding of both foundation and application concepts emphasized by contemporary safety programs. The curriculum emphasizes safety integration, risk curtailment, hazard abatement and loss minimization. The philosophical basis of this major is to achieve the mission of curtailing the causes of incidents and minimizing sustained losses and incurred costs. The primary focus is to protect and preserve people, property, and productivity. The major is based on safety management with technical elements incorporated throughout the curriculum. Courses are offered primarily during the day with some evening classes.

All students accepted into the safety and environmental
management major are encouraged to be student members of both the American Society of Safety Engineers and the student section of ASSE at Slippery Rock University. Students are also encouraged to attend meetings, conferences, seminars, and workshops as part of their professional educational growth.

Students enrolled in the safety major are provided a unique opportunity to access Slippery Rock University's Center for Safety and Environmental Management. Students are able to enroll, at no cost, in the available certification course offerings and programs, such as hazardous waste operations and emergency response, permit required confined space, hazard communication, respiratory protection, blood borne pathogens, asbestos, etc.

The B.S. in Safety and Environmental Management degree is recognized by the Institute for Safety and Health Management. Such recognition permits Slippery Rock University's Safety Management graduates to apply for the Associate Safety and Health Manager's (ASHM) designation. With two additional years of work experience the graduate can then seek the Certified Safety and Health Manager's designation. Individuals graduating from nonrecognized programs must work five years before applying for certification.

Upon completion of the degree, students are prepared for entry-to-mid-level
administrative, managerial, and supervisory positions in the field of safety in a variety of enterprises, including, health care, insurance, manufacturing, chemical, consulting, higher education and government agencies. Examples of positions include: risk control manager, safety consultant, safety coordinator, safety account manager, assistant safety representative, loss control representative, health and safety scientist, safety and environmental manager, safety engineer, regional safety coordinator, senior environmental engineer, corporate health and safety officer, regulatory compliance coordinator, safety and health compliance officer, safety supervisor, and field safety coordinator.

The internship program is administered in cooperation with a variety of agencies, including government, industry insurance, health care and other related enterprises. Students in the internship program gain practical experience under the direction of professional safety personnel. The $12-$ week, 12 -credit internship is offered only during the summer term, with the majority of interns receiving compensation. Students have been offered safety positions at their internship site as a result of their performance.

Contact the Department of Health and Safety for the most current requirements.

# Requirements for the Major - 

Credits: 60

## Required

Professional

## Courses:

- CHEM 104 - Introduction

Chemistry I Credits: 3
or

- CHEM 107 - General Chemistry I Credits: 3
- HSAF 118 - Introduction
to Safety Credits: 3
- HSAF 218 - Hazard

Analysis and Legislative
Compliance Credits: 3

- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 -

Comprehensive Emergency
Management and Fire
Services Credits: 3

- HSAF 338 - Ergonomics
and Human Factors Credits: 3
- HSAF 348 - Hazardous

Materials and Waste
Management Credits: 3

- HSAF 358-Construction

Safety Credits: 3

- HSAF 368 - Injury and

Damage Incidents Evaluation Credits: 3

- HSAF 408 - Contemporary

Safety Topics and Issues
Credits: 3

- HSAF 418 - Security in the

Workplace Credits: 3

- HSAF 428 - Motor

Transportation Fleet Safety Credits: 3

- HSAF 448 - Management and Integration of Safety Credits: 3
- HSAF 450 - Internship

Credits: 12

- HSAF 488 - Safety

Training and Development Credits: 3

- MGMT 250 - Principles of

Management Credits: 3
or

- MGMT 251 -

Organizational Behavior Credits: 3

- MGMT 354 - Human

Resources Management Credits: 3

## Internship

Requirement

It is the student's responsibility to secure an internship site. If an internship site is not secured, the student will take course work to meet the 120 credit graduation requirement.

## Degree

Completion in
Four Years Safety
\& Environmental Management (BS)

Completion Hours: 120

## Freshman Year -

## Total Hours: 30

- Liberal Studies Credits:21
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- HSAF 118 - Introduction
to Safety Credits: 3
Sophomore Year -
Total Hours: 30
- Liberal Studies Credits: 12
- CHEM 104 - Introduction

Chemistry I Credits: 3

- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- HSAF 218 - Hazard

Analysis and Legislative Compliance Credits: 3

- HSAF 338 - Ergonomics and Human Factors Credits: 3
- MGMT 250 - Principles of

Management Credits: 3
or

- MGMT 251 -

Organizational Behavior Credits: 3

## Junior Year - Total

Hours: 30

- Elective Credits: 3
- HSAF 318 - Principles of Industrial Hygiene Credits: 3
- HSAF 328 -

Comprehensive Emergency
Management and Fire
Services Credits: 3

- HSAF 348 - Hazardous

Materials and Waste
Management Credits: 3

- HSAF 358 - Construction

Safety Credits: 3

- HSAF 368 - Injury and

Damage Incidents Evaluation Credits: 3

- HSAF 428 - Motor

Transportation Fleet Safety Credits: 3

- HSAF 448 - Management and Integration of Safety Credits: 3
- HSAF 488 - Safety

Training and Development Credits: 3

- MGMT 354 - Human

Resources Management Credits: 3

Senior Year - Total
Hours: 30

- Elective Credits: 12
- HSAF 408 - Contemporary

Safety Topics and Issues Credits: 3

- HSAF 418 - Security in the

Workplace Credits: 3

- HSAF 450 - Internship

Credits: 12
(summer)

## Social Work (BS)

## Requirements for

 the Major -Credits: 54-57
Required Courses -

## Credits: 9

Liberal Arts Base

- POLS 101 - American

National Government
Credits: 3

- PSYC 105 - Introduction
to Psychology Credits: 3
- SASW 201 - Principles of Sociology Credits: 3


## Core Courses Credits: 30

- SASW 105 - Human

Diversity Credits: 3

- SASW 250 - Social

Welfare Institutions Credits:
3

- SASW 251 - Introduction
to Social Work Credits: 3
- SASW 328 - Human

Behavior and the Social
Environment I Credits: 3

- SASW 329 - Human

Behavior and the Social Environment II Credits: 3

- SASW 355 - Social Work

Methods I Credits: 3

- SASW 356 - Social Work Methods II Credits: 3
- SASW 357 - Social Work Methods III Credits: 3
- SASW 407 - Social Policy

Issues Credits: 3

Research

## Methodology -

Credits: 6

- SASW 317 - Statistical

Methods Credits: 3

- SASW 318 - Research

Methods Credits: 3
Internships -
Credits: 9-12

```
A 405-to 540-hour supervised placement in selected professional agencies.
- SASW 450 - SASW
Internship Credits: 3 to 15
A 405-to 540-hour
supervised
placement in
selected
professional
agencies.
```


## Degree

## Completion in

## Four Years Social Work (BS)

Completion Hours: 120

## Freshman Year -

Total Hours: 29

- PE - Credits: 2
- Liberal Studies - Credits: 3
- Free Elective - Credits: 3
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- MATH 113 - Mathematics
as a Liberal Art Credits: 3
or higher
- POLS 101 - American

National Government Credits: 3
(National
Experience)

- PSYC 105 - Introduction
to Psychology Credits: 3
(Hum Institution)
- SASW 105 - Human

Diversity Credits: 3

- SASW 201 - Principles of Sociology Credits: 3


## Sophomore Year -

 Total Hours: 33- Liberal Studies - Credits:

12

- Free Elective - Credits: 3
- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- SASW 250 - Social

Welfare Institutions Credits:
3

- SASW 251 - Introduction
to Social Work Credits: 3
- SASW 328 - Human

Behavior and the Social
Environment I Credits: 3

- SASW 329 - Human

Behavior and the Social
Environment II Credits: 3
Junior Year - Total
Hours: 30

- Liberal Studies - Credits: 3
- Liberal Studies - Credits: 9
- Free Elective - Credits:9
- SASW 317 - Statistical

Methods Credits: 3

- SASW 318 - Research Methods Credits: 3
- SASW 355 - Social Work

Methods I Credits: 3

## Senior Year - Total

Hours: 25-28

- Liberal Studies - Credits: 4
- SASW 356 - Social Work

Methods II Credits: 3

- SASW 357 - Social Work

Methods III Credits: 3

- SASW 407 - Social Policy

Issues Credits: 3

- SASW 450 - SASW

Internship Credits: 3 to 15

- SASW 460 - Senior

Synthesis Credits: 3

## SociologyAnthropology

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.

The sociology program offers three tracks: sociologygeneral, sociologycriminology, and sociology-
anthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good preparation for professional positions requiring knowledge of society and human behavior such as law, personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and
differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and evolution of human beings and their culture, providing students with an opportunity to look at humans in their infinite biological and cultural varieties.

## Requirements for the Major -

Credits: 33

## Core Courses -

## Credits: 12

- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction
to Anthropology Credits: 3
- SASW 317 - Statistical

Methods Credits: 3

- SASW 412 - Basic Sociological Theory Credits: 3


## Required Courses in

Anthropology

## Electives - Credits:

## 15

- SASW 211 - Physical

Anthropology Credits: 3

- SASW 212 -

Archaeology/World
Prehistory Credits: 3

- SASW 310-Cultural Area

Studies Credits: 3

- SASW 320 - Anthropology Methods Credits: 3
- SASW 401 - Applied

Anthropology Credits: 3

## Electives - Credits: <br> 6

From the following:

- SASW 395
- SASW 226 - Population and Society Credits: 3
- SASW 309 - Health and

Society Credits: 3

- SASW 312 - Archaeology

Techniques and Laboratory Credits: 3

- SASW 322 - Aztecs, Incas and Maya Credits: 3
- SASW 324 - The Family

Credits: 3

- SASW 327 - Religion and

Society Credits: 3

- SASW 339 - Sex Roles and Society Credits: 3
- SASW 450 - SASW

Internship Credits: 3 to 15

## Degree

Completion in
Four Years
Sociology-
Anthropology
(BA)

Completion Hours: 120

## Freshman Year -

## Total Hours: 32

- Liberal Studies - Credits:

18

- PE - Credits: 2
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- SASW 201 - Principles of

Sociology Credits: 3

- SASW 202 - Introduction
to Anthropology Credits: 3
Sophomore Year -
Total Hours: 30
- SASW Elective -

Credits: 3

- MOD LANG 101 -

Credits: 3

- MOD LANG 102 -

Credits: 3

- Liberal Studies - Credits:

15

- COMM 200 - Public

Speaking Credits: 3

- SASW 211 - Physical

Anthropology Credits: 3
Junior Year - Total
Hours: 30

- MOD LANG 103 -

Credits: 3

- Liberal Studies - Credits: 9
- Free Electives - Credits: 6
- SASW 212 -

Archaeology/World
Prehistory Credits: 3

- SASW 310 - Cultural Area

Studies Credits: 3

- SASW 317 - Statistical

Methods Credits: 3

- SASW 320 - Anthropology

Methods Credits: 3

## Senior Year - Total

Hours: 28

[^1]- SASW 412 - Basic

Sociological Theory Credits: 3

- SASW 450 - SASW

Internship Credits: 3 to 15

## SociologyCriminology

## (BA)


#### Abstract

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.


The sociology program offers three tracks: sociologygeneral, sociologycriminology, and sociologyanthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good
preparation for professional positions requiring knowledge of society and human behavior such as law, personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and evolution of human beings and their
culture, providing students with an opportunity to look at humans in their infinite biological and cultural varieties.

## Requirements for

 the Major Credits: 36
## Core Courses -

Credits: 24

```
- SASW 205
- SASW 201 - Principles of Sociology Credits: 3 - SASW 202 - Introduction to Anthropology Credits: 3
- SASW 304 - Urban Sociology Credits: 3
- SASW 317 - Statistical Methods Credits: 3
- SASW 318 - Research Methods Credits: 3
- SASW 348 - Sociology of Organizations Credits: 3
- SASW 412 - Basic Sociological Theory Credits: 3
```


## Electives - Credits:

## 12

Three courses from the following:

- SASW 273 - American

Corrections Credits: 3

- SASW 323 - Deviant

Behavior Credits: 3

- SASW 333 - Crime,

Justice and Society Credits: 3

- SASW 343 - Criminal

Investigations Credits: 3

- SASW 345 - Juvenile

Delinquency Credits: 3

- SASW 360 - Police and

Society Credits: 3

- SASW 404 - Adjudication
in Crime and Justice Credits:
3
- SASW 414 - Law and

Social Policy Credits: 3
One course from the following:

- PSYC 202
- PHIL 335 - Philosophy of Law and Justice Credits: 3
- POLS 202 - Politics of Law Enforcement Credits: 3 - PSYC 302 - Psychology of Criminal Behavior Credits: 3

Internship - Credits: 9 optional

## Degree

Completion in

## Four Years

SociologyCriminology (BA)

Completion Hours: 120
Freshman Year -
Total Hours: 29

- Liberal Studies -

Credits: 15

- PE - Credits: 2
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- SASW 201 - Principles of

Sociology Credits: 3

- SASW 202 - Introduction
to Anthropology Credits: 3


## Sophomore Year -

Total Hours: 30

- SASW Elective \#1 -

Credits: 3

- MOD LANG 101 -

Credits: 3

- MOD LANG 102 -

Credits: 3

- Liberal Studies - Credits:

12

- Free Elective - Credits: 3
- SASW 205 - Credits: 3
- COMM 200 - Public

Speaking Credits: 3

- SASW 304 - Urban

Sociology Credits: 3
Junior Year - Total
Hours: 30

- SASW Elective \#2 -

Credits: 3

- MOD LANG 103 -

Credits: 3

- Liberal Studies - Credits:

12

- Free Elective - Credits: 3
- SASW 317 - Statistical

Methods Credits: 3

- SASW 318 - Research

Methods Credits: 3

- SASW 348 - Sociology of

Organizations Credits: 3

## Senior Year - Total

Hours: 25-34

- SASW Elective \#3 -

Credits: 3

- SASW Elective \#4 -

Credits: 3

- Free Electives or Internship - Credits: 9
- Liberal Studies - Credits: 9
- Free Electives - Credits: 7
- SASW 412 - Basic

Sociological Theory Credits: 3

## Sociology- <br> General (BA)

Sociology is the study of the many types of groups that make up a society, from the small family to the huge city. Sociologists examine how such groups are formed, how they work together, how they compete, and how they change. Perhaps most important of all, sociologists study how these groups influence the behavior of the people who live in the society. Sociologists collect information in many different ways, including surveys, observing the interaction of people, checking records, and performing experiments. With this information, sociologists develop and test theories, analyze problems, and help organizations reach decisions, among other contributions.

The sociology program offers three tracks: sociologygeneral, sociologycriminology, and sociologyanthropology. Upon graduation, all sociology majors receive a Bachelor of Arts degree. Students in the general sociology track may seek employment after graduation in positions that use sociological knowledge and skills, such as policy analysis and research. This program is also good preparation for professional positions requiring knowledge of society and human behavior such as law,
personnel management, and many of the helping professions.

The criminology specialization is a critical study of crime, justice, and the role of law in society. This program is well suited to students who plan careers in law, corrections, and juvenile justice and treatment. In addition to classroom studies, sociology-criminology majors may take an internship to gain practical experience working under supervision. All sociology majors gain a broad liberal arts background and strong preparation for graduate education. The BA Degree in Sociology requires three semesters of a foreign language.

Anthropology is the study of human behavior and culture, with a focus on cultural anthropology or archaeology. Most anthropologists are interested in non-western societies, such as tribal and peasant people, but recently many have studied modern ethnic and tribal groups. Anthropologists look for similarities and differences in the life styles of people past and present. Among the topics of their interests are how people make a living, govern themselves, form social ties, and worship. In addition to describing social facts, anthropologists offer insights into the origin and evolution of human beings and their culture, providing students with an opportunity to look at humans in their infinite
biological and cultural varieties.

## Requirements for the Major -

Credits: 30-39

## Core Courses -

Credits: 21

- SASW 201 - Principles of

Sociology Credits: 3

- SASW 202 - Introduction
to Anthropology Credits: 3
- SASW 304 - Urban

Sociology Credits: 3

- SASW 317 - Statistical

Methods Credits: 3

- SASW 318 - Research

Methods Credits: 3

- SASW 348 - Sociology of

Organizations Credits: 3

- SASW 412 - Basic

Sociological Theory Credits: 3

## Electives - Credits:

9

Three elective courses from within the department with advisor approval

Internship - Credits:
6-9
optional

## Degree

## Completion in

Four Years
Sociology General (BA)

## Freshman Year -

Total Hours: 29

- Liberal Studies - Credits:

15

- PE- Credits: 2
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College Writing II Credits: 3
- SASW 201 - Principles of Sociology Credits: 3
- SASW 202 - Introduction to Anthropology Credits: 3

Sophomore Year Total Hours: 30

- SASW Elective \#1 -

Credits: 3

- MOD LANG 101 -

Credits: 3

- MOD LANG 102 -

Credits: 3

- Liberal Studies - Credits:

12

- Free Elective - Credits: 3
- COMM 200 - Public

Speaking Credits: 3

- SASW 304 - Urban

Sociology Credits: 3
Junior Year - Total
Hours: 30

- SASW Elective \#2 -

Credits: 3

- MOD LANG 103 -

Credits: 3

- Liberal Studies -

Credits: 12

- Free Elective - Credits: 3
- SASW 317 - Statistical

Methods Credits: 3

- SASW 318 - Research

Methods Credits: 3

- SASW 348 - Sociology of

Organizations Credits: 3

# Senior Year - Total 

Hours: 31

- SASW Elective \#3 -

Credits: 3

- Free Electives or

Internship - Credits: 9

- Liberal Studies - Credits: 3
- Free Electives - Credits: 13
- SASW 412 - Basic

Sociological Theory Credits: 3

## Spanish (BA)

Why study Spanish? There are many substantive reasons, but an important one is that Hispanics are the fastest growing segment of the U.S. population. Therefore, the knowledge of Spanish is of value in all human services professions, as well as in many areas of business, especially since Latin America represents a large potential market. Because Spanish can become an invaluable skill in an occupation, many students choose to combine Spanish with another area as a double major or as a minor.

Students with previous language experience must take the modern language Spanish placement test to determine course eligibility. Students desiring to receive academic credit for previous experience must take the appropriate CLEP examination administered by the university. The CLEP examination must be taken before enrollment in world language courses and for freshmen within the first few weeks of the semester.

Spanish 101, 102, and 103 satisfy the liberal arts language requirement for the bachelor of arts degree in any discipline.

## Requirements for

 the Major -Credits: 27-45

## Required Courses:

- SPAN 101 - Spanish

Language \& Culture I
Credits: 3

- SPAN 102 - Spanish

Language \& Culture II Credits: 3

- SPAN 103 - Spanish

Language \& Culture III
Credits: 3

- SPAN 200 - Intermediate

Spanish Grammar Credits: 3

- SPAN 201 -

Communicating in Spanish
Credits: 3

- SPAN 220 - Reading in

Spanish Credits: 3
Some or all of these credits may be exempted through a department placement exam, AP credits or CLEP credits. Heritage speakers are exempt from certain courses and should consult the Department of Modern Languages and Cultures for specific requirements.

- SPAN 300 - Spanish

Grammar Review Credits: 3

- SPAN 301 - Intermediate

Spanish Communication Credits: 3

- SPAN 401 - Advanced

Oral Communication Credits: 3

## One of following civilization courses:

- SPAN 305 - Spanish

Civilization Credits: 3

- SPAN 306 - The

Civilzation of South America Credits: 3

- SPAN 307 - U.S. SpanishSpeaking Minority Cultures Credits: 3
- SPAN 308 - The Civilzation of Mexico and Central America Credits: 3


## One of the following literature survey courses:

- SPAN 330 - Spanish

Literature - Gen. Of 98 to Present Credits: 3

- SPAN 332 - Spanish-

American Literature - 20th Century and Beyond Credits: 3

One of the following literature courses:

- SPAN 431 - Spanish Literature - Medieval to 18th Century Credits: 3
- SPAN 432 - SpanishAmerican Literature PreColumbian to 19th Century Credits: 3

6 credits of Spanish electives at 300- or 400 -level (except

## Specialization:

International

## Business

This program is designed for students who prefer the flexibility of a liberal arts program while studying the international market. Such a student may decide to enter an MBA program designed specifically for the liberal arts language major. Specific requirements for the specialization in international business are available from the Department of Modern Languages and Cultures.

## Degree

Completion in Four Years Spanish (BA)

## Completion Hours: 120

Freshman Year -
Total Hours: 32

- PESM Activity Credits: 1
- Liberal Studies Credits: 12
- Electives Credits: 6
(** See footnote)
- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- PE 141 - Personal Physical Fitness Credits: 1
- SPAN 102 - Spanish

Language \& Culture II Credits: 3
(* See footnote)

- SPAN 103 - Spanish

Language \& Culture III Credits: 3

Sophomore Year Total Hours: 33

- Liberal Studies Credits: 6
- Electives Credits: 9
- CDEV 248 - Human

Development and Education Credits: 3

- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- SPAN 201 -

Communicating in Spanish Credits: 3

- SPAN 220 - Reading in Spanish Credits: 3
- SPAN 300 - Spanish

Grammar Review Credits: 3
Junior Year - Total
Hours: 30

- Liberal Studies Credits: 9
- Electives Credits: 12
- SPAN 300 - Spanish

Grammar Review Credits: 3

- SPAN 301 - Intermediate

Spanish Communication Credits: 3

- SPAN 305 - Spanish

Civilization Credits: 3

- SPAN 401 - Advanced

Oral Communication Credits: 3

Senior Year - Total
Hours: 25

- SPAN Literature (2)

Credits: 6

- SPAN Electives Credits: 6
- Liberal Studies Credits: 3
- Electives Credits: 7


## Footnotes

$*$ Most students enter the
major with at least three
years of high school Spanish
and are able to exempt the
101 level. Some students are
able to place higher, which
allows ample time to
complete a second major or
minor within a four-year
sequence.
** Most of our BA candidates combine Spanish with a second major or minor. Depending on what second major may be chosen, several of the courses from the second major may be counted in the liberal studies program as well.
*** A semester study abroad experience is highly recommended.

## Special

Education
Certification
and Dual Certification (SPEd/ELEd)

The university is authorized by the Pennsylvania Department of Education to provide certification courses and practical experiences designed to meet requirements for the Cognitive, Behavioral, and Physical Disabilities (CBPD) certificate in special education. The teaching certificate enables graduates
to teach children identified as having mental retardation, learning disabilities, physical disabilities, or behavior disorders in school placements from kindergarten through grade twelve.

While students may declare the major in special education and work for a single teaching certificate (CBPD), most students opt for the dual certification program. Students may declare the major in special education and work for a single teaching certificate, the comprehensive M/PH certificate. Students may declare the special education/elementary education major and study for elementary education teacher certification and special education certification. The special education/elementary education certification program includes credits beyond the minimum required for the baccalaureate degree. The Teacher Education Policy Manual describes procedures for students interested in pursuing multiple teaching certificates.

An integral component of pre-professional programs in special education is the requirement of a practicum experience for credit. Practicum is part of the Special Education Professional Semester which integrates strategy courses with a field experience in local school districts.

## Requirements for the Major

The specific course of study and requirements leading to teacher certification in special education are available in the Department of Special Education or from the student's advisor. See also Teacher Education Policy Manual, available in 105 McKay Education Building or on the College of Education homepage.

## Degree

## Completion in

Four Years

Dual Certification - Special Education (K-12) and
Elementary Education (K6) - BSED Special Education (BSED)

Completion Hours: 139
Freshman Year -
Credits: 35

- LS Science Goal/Lab -

Credits: 3

- FYRST Seminar - Credits:

1

- Liberal Studies - Credits:

12

- SPED 200-level - Credits:

3

- PESM 161 - Credits: 1
- CDEV 248 - Human

Development and Education
Credits: 3

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- MATH 113 - Mathematics
as a Liberal Art Credits: 3
or higher
- SPED 100 - Introduction to

Special Education Credits: 3

## Sophomore Year -

Credits: 37

- SPED 200 Level -

Credits: 6

- Liberal Studies - Credits: 9
- CDEV 342 - Educational

Psychology Credits: 3

- COMM 200 - Public

Speaking Credits: 3

- DANC 223 - Introduction
to Creative Dance Credits: 1
or PESM 108
- ELEC 281-Cultural

Awareness in the Elementary
Classroom Credits: 3

- ELEC 288 - Children's

Literature Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- MATH 210 - Elementary

Mathematics I Credits: 3

- SEFE 200 - Introduction to

Education Credits: 3
Junior Year -
Credits: 37

- Liberal Studies - Credits: 6
- ELEC 301 - Math/Science

Teaching Lab Credits: 1

- ELEC 320 - Elementary

Field Experience Credits: 3

- ELEC 332 - The Teaching
of Elementary Reading
Credits: 3
- ELEC 342 - The Teaching of Elementary Mathematics Credits: 3
- ELEC 352 - The Teaching of Language Arts Credits: 3
- ELEC 362 - The Teaching of Elementary Science Credits: 3
- ELEC 372 - The Teaching of Elementary Social Studies Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational

Measurements, Assessment and Evaluation Credits: 3

- SEFE 280 - Cultural

Minorities in Education Credits: 3

- SPED 302 - Educational

Strategies: Learners with Developmental Disabilities Credits: 3

## Senior Year -

Credits: 30

- SPED Student Teaching Credits: 6
- ELEC Student Teaching Credits: 6
- ELEC 385 - Creativity in Elementary School Credits: 1 to 3
- SPED 306 - Educational Strageties: Severe Learning and Behavior Disorders Credits: 3
- SPED 312 - Educational

Strategies for Learners with Mild Disabilities Credits: 3

- SPED 313 - Classroom

Management Strategies Credits: 3

- SPED 314 - Educational Assessment of Exceptional Children Credits: 3
- SPED 400 - Special Education Practicum Credits: 3


## SpecializationSocial StudiesHistory (BS)

Requirements for the Program

## Two of the <br> following world history courses:

- HIST 151 - Ancient and Medieval World Credits: 3
- HIST 152 - Rise of the

Modern World Credits: 3

- HIST 153 - Twentieth

Century World Credits: 3
Two of the
following US
history courses:

- HIST 201 - Colonial

America to 1825 Credits: 3

- HIST 202 - United States,

1825-1900 Credits: 3

- HIST 203 - U.S. History

Since 1900 Credits: 3

- HIST 205 - Historians

Craft Credits: 3
HIST 205 is required

Twenty-one credits from the following groups:

Pennsylvania History
American History
Non-Western History
European History
Students desiring a secondary
Social Studies - History
certificate will complete
credits toward specialization
in addition to the required
credits in Liberal Studies (45-
46) and Professional

Education (34).

- CDEV 248 - Human

Development and Education Credits: 3

- HIST 435 - Pennsylvania Credits: 3
- SEFE 200 - Introduction to Education Credits: 3
- SEFE 230 - Production and Utilization of Instructional Technology Credits: 3
- SEFE 270 - Educational

Measurements, Assessment and Evaluation Credits: 3

- SEFE 319 - Teaching of Social Studies in Secondary Schools Credits: 3
- SEFE 329 - Methods of Instruction in Secondary Conent Areas Credits: 3
- SEFE 380 - History and Philosophy of Education Credits: 3
- SEFE 426 - Practicum in Secondary Education Credits: 1
- SEFE 455 - Student

Teaching - Secondary
Education Credits: 12, 9, 6,3

- SPED 315 - Special

Education Issues in Diverse
Secondary Classrooms Credits: 3

SPED 315 and SEFE 455 are taken the same semester

## Degree

Completion Four Years BSED (CitizenshipHistory)

## Freshman Year -

Total Hours: 28

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- G\&ES 105 - World

Regional Geography Credits: 3

- HIST 152 - Rise of the

Modern World Credits: 3

- HIST 201 - Colonial

America to 1825 Credits: 3

- HIST 202 - United States, 1825-1900 Credits: 3
- MATH 113 - Mathematics
as a Liberal Art Credits: 3
- MATH 115 - Financial

Mathematics Credits: 3

- MUSI 101 - Introduction
to Music Credits: 3
- SASW 106 - Race and Ethnic Diversity in the U.S.A. Credits: 3


## Sophomore Year -

 Credits: 31- BIOL 104 - Principles of Biology Credits: 4
- CDEV 248 - Human

Development and Education Credits: 3

- COMM 200 - Public

Speaking Credits: 3

- ECON 105 - Economics of

Social Issues Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- HIST 153-Twentieth

Century World Credits: 3

- HIST 205 - Historians

Craft Credits: 3

- HIST 237 - Outstanding Americans Credits: 3
- PHYS 101 - Concepts of Science I Credits: 3
- SEFE 200 - Introduction to Education Credits: 3

Junior Year -
Credits: 31

- G\&ES 135 - Introduction to Environmental Problems Credits: 3
- HIST 322 - Germany in the Twentieth Century Credits: 3 - HIST 340 - The Historical and Political Legacies of the Vietnam Era Credits: 3
- HIST 380 - Egyptology Credits: 3
- POLS 101 - American

National Government
Credits: 3

- PSYC 105 - Introduction
to Psychology Credits: 3
- SASW 202 - Introduction
to Anthropology Credits: 3
- SEFE 230 - Production and

Utilization of Instructional
Technology Credits: 3

- SEFE 270 - Educational

Measurements, Assessment and Evaluation Credits: 3

- SEFE 329 - Methods of Instruction in Secondary Conent Areas Credits: 3
- SEFE 426 - Practicum in Secondary Education Credits: 1


## Senior Year -

Credits: 30

- HIST 331 - England to 1689 Credits: 3
- HIST 332 - England Since

1689 Credits: 3

- HIST 382 - Modern Asian

Pacific Rim Credits: 3

- POLS 348 - The

Holocaust: Genocide and
Political Violence Credits: 3

- SEFE 319- Teaching of

Social Studies in Secondary
Schools Credits: 3

- SEFE 380 - History and

Philosophy of Education
Credits: 3

- SEFE 455 - Student

Teaching - Secondary
Education Credits: 12, 9, 6,3

- SPED 315 - Special

Education Issues in Diverse
Secondary Classrooms
Credits: 3

## Sport <br> Management

 (BS)"The sports industry is fast paced and extremely competitive. The practical experience stressed in Slippery Rock's Sport Management program prepared me for the "real world" expectations of the industry. Even after years in collegiate athletics I find myself consistently referring back to principles learned at Slippery Rock. I know my experience at The Rock laid the foundation for the success<br>I have achieved"

David A. Sabolcik, Jr.,
SRU/98
Director of Annual Giving
Lobo Club
University of New Mexico
Recent estimates describe sport as one of the ten largest industries in the United States encompassing over $\$ 190$ billion dollars. This industry, due to its wide variety of positions, places unique demands on those involved in its management including skills in such areas as communications, public relations, facility management, marketing, budgeting, and legal aspects specific to sport settings.

The sport management undergraduate faculty has identified international sport as a future trend for sport
management majors. It is recognized that the impact of sport on an international setting is fertile ground for tremendous development. Many recent developments demonstrate the globalization of sport and these developments indicate the continued dynamic nature accompanying the growth of sport management worldwide.

Providing our sport management majors with the opportunity to gain knowledge and hands on experience is paramount for SRU's growth as a leader in undergraduate sport management in the United States.

## Requirements for

## the Major -

Credits: 58

This major is designed to prepare students with the necessary sport business concepts, management, marketing and public relation skills to become successful managers in sport-related agencies. These agencies are diverse and include, professional sports, Sport marketing firms, intercollegiate athletic departments, YMCA/YWCA's, sporting goods sales, fitness clubs, sport arenas, the Olympics, commercial recreational facilities and other sportrelated agencies. In addition to the sport management. A 12-credit internship is required in a sport-related agency during the last semester of the program.

Students are encouraged to secure a minor in business.

## Specialization

Courses - Credits: 46

- SPMT 150 - Practical Application Credits: 1 (01-02-03-04)
- SPMT 194 - Introduction to Sport Management
Credits: 3
- SPMT 269 - American Sport in the 21st Century Credits: 3
- SPMT 286 - Sport

Communication Credits: 3

- SPMT 294 - Sport

Management and Ethics Credits: 3

- SPMT 394 - Sport

Marketing Credits: 3

- SPMT 450 - Sport

Management Internship Credits: 12

- SPMT 494 - Sport

Management Senior Seminar Credits: 3

- SPMT 506 - Sport Facility and Event Management Credits: 3
- SPMT 515 - Diversity Issues in Sport Management Credits: 3
- SPMT 586 - Sport Law

Credits: 3

- SPMT 599 - Sport

Management Research
Management Credits: 3
Required Support
Courses - Credits:
12

- ACCT 205 - Accounting for Decision Makers Credits: 3
- MGMT 250 - Principles of Management Credits: 3
- MGMT 251 -

Organizational Behavior Credits: 3

- MRKT 230 - Principles of Marketing Credits: 3


## Sport Management <br> Electives - Credits:

18

Select 9 credit hours of 300 level (or above) classes from Accounting, Communication, Economics, Finance, Management or Marketing.

## Degree

## Completion in

Four Years Sport
Management (BS)

Completion Hours: 120
Freshman Year -
Credits: 30

- Elective - Credits: 3
- Liberal Studies - Credits: 9
- CPSC 110 - Computer

Concepts Credits: 3

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- SPMT 150 - Practical

Application Credits: 1
(P see footnotes)

- SPMT 194 - Introduction
to Sport Management
Credits: 3
- SPMT 294 - Sport

Management and Ethics
Credits: 3
(P see footnotes)

## Sophomore Year -

Credits: 31

- Liberal Studies - Credits:

15

- ACCT 205-Accounting for Decision Makers Credits: 3
- COMM 200 - Public

Speaking Credits: 3

- MGMT 250 - Principles of Management Credits: 3
or
- MGMT 251 -

Organizational Behavior
Credits: 3

- MRKT 230 - Principles of

Marketing Credits: 3

- SPMT 150 - Practical

Application Credits: 1
(P see footnotes)

- SPMT 269 - American

Sport in the 21 st Century Credits: 3

## Junior Year -

Credits: 31

- Elective - Credits: 6
- Liberal Studies -

Credits: 15

- SPMT 150 - Practical

Application Credits: 1
(P see footnotes)

- SPMT 286 - Sport

Communication Credits: 3
(P see footnotes)

- SPMT 394 - Sport

Marketing Credits: 3
(C, P see footnotes)

- SPMT 506 - Sport Facility and Event Management Credits: 3
(C, P see footnotes)
Senior Year -
Credits: 28
- Liberal Studies - Credits: 3
- SPMT 450 - Credits: 12
(C, P see footnotes)
- SPMT 150 - Practical

Application Credits: 1
(P see footnotes)

- SPMT 494 - Sport

Management Senior Seminar Credits: 3
(C, P see footnotes)

- SPMT 515 - Diversity

Issues in Sport Management Credits: 3
(C, P see footnotes)

- SPMT 586 - Sport Law

Credits: 3
(C, P see footnotes)

- SPMT 599 - Sport

Management Research
Management Credits: 3
(C, P see footnotes)

## Footnotes

$(\mathrm{P})=$ Prerequisite required
(C) = Coded course; acceptance to the major required

## Student <br> Support <br> Services

Program

The federally funded Student Support Services Program serves students who have experienced academic challenges at Slippery Rock.
Students who are on academic probation or who are on an academic readmission contract participate in the program to develop successful college skills. Students participate in individual and group academic advisement activities and learning strategies course work which
teaches them how to apply and develop effective learning and study habits. Students participating in the program enroll in a learning strategies course, which is focused on developing their learning strategies, academic goals, and decision-making skills.

## Teacher Certification in

## Biology

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in biology must earn a bachelor of arts or a bachelor of science degree in biology and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the Secondary
Education/Foundations of Education office in 114
McKay Education Building.

## Teacher

Certification in Chemistry

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in chemistry must earn a bachelor of arts or a bachelor of science degree in chemistry and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

## Teacher

 Certification in Earth and Space Science
## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in earth and space science must earn a bachelor of arts or a bachelor of science degree in geology and contact the Department of Secondary
Education/Foundations of Education concerning its graduate program in
education. Information about this program, including prerequisites for admission, may be obtained from the Secondary
Education/Foundations of
Education office in 114
McKay Education Building.

## Teacher

## Certification in Mathematics

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock University. Students seeking secondary school teaching certification in mathematics must earn a bachelor of arts or a bachelor of science degree in mathematics and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

## Teacher Certification in Physics

## Requirements for the Certification

Teacher certification is earned through the master of education degree at Slippery Rock. Students seeking secondary school teaching certification in physics must earn a bachelor of arts or a bachelor of science degree in physics and contact the Department of Secondary Education/Foundations of Education concerning its graduate program in education. Information about this program, including prerequisites for admission, may be obtained from the secondary education/foundations of education office in 114 McKay Education Building.

# The Center for Government Contracting Assistance 

212 East Cooper Street
724-738-2346

## Contracting Specialist

Renee Decker
The Government Contracting Assistance Center (GCAC), a unique segment of the College of Business, Information, and Social Sciences, was established for the purpose of aiding local businesses and industries to compete successfully for federal, state and local government contracts and subcontracts.

The GCAC is a full service procurement technical assistance center. It's primary function is to enhance economic revitalization by
bringing federal, state and local contract dollars into the area. The GCAC uses an advanced computerized marketing system to notify companies of federal, state and local bidding opportunities. It also provides education and training on government contracting policies and procedures through regularly scheduled seminars and through individual counseling sessions with companies.

## The Institute

 for Learning in Retirement (ILR)The Institute for Learning In Retirement (ILR) at Slippery
Rock University is a member-directed organization, providing lively learning experiences for mature adults who share a love of learning. The ILR is an affiliate of the Elderhostel Institute Network. The nominal membership dues cover as many classes in the ILR program as one wishes to take as well as other member benefits. The office and instructional site for the ILR is located at the Center for Lifelong and Community Learning in downtown Slippery Rock. Free and convenient parking is readily available. For additional information please call 724-738-1604 or email: learning_retirement@sru.edu.

Theatre (BA)

# Requirements for the Theatre <br> Bachelor of Arts - 

 Credits: 40
## Required Core

Courses for all Specializations Credits: 21

\author{

- THEA 131 - Fundamentals <br> of Acting Credits: 3 <br> - THEA 132 - Stagecraft <br> Credits: 3 <br> - THEA 151 - Rehearsal and <br> Production Credits: 1 <br> (Four credits required) <br> - THEA 281 - Survey of Dramatic Literature Credits: 3 <br> - THEA 337 - Directing <br> Credits: 3 <br> - THEA 425 - Professional <br> Theatre Practice Credits: 3 <br> \section*{Select One of the} <br> \section*{Following:}
}

Specialization:
Acting - Credits: 21
Required Courses Credits: 18

- THEA 222 - Acting II

Credits: 3

- THEA 322 - Acting

Technique Credits: 3

- THEA 324 - Stage Makeup

Credits: 3

- THEA 328 - Acting

Shakespeare Credits: 3

- THEA 330 - Voice and Movement for the Actor Credits: 3
- THEA 394 - Theories of Acting and Directing Credits: 3


## Electives - Credits: 3

- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 215 -

Drawing/Drafting/CAD Credits: 3

- THEA 235 - Costume

Technology Credits: 3

- THEA 269 - Playwriting

Credits: 3

- THEA 322 - Acting

Technique Credits: 3

- THEA 329 - Shakespeare

Tour Credits: 3

- THEA 332 - Advanced

Stagecraft Credits: 3

- THEA 333 - Scene Design

Credits: 3

- THEA 334 - Stage

Lighting Credits: 3

- THEA 335 - Costume

Design and History Credits: 3

- THEA 345 - Stage

Management and Safety
Credits: 3

- THEA 355 - Projects in

Theatre Credits: 1 to 2

- THEA 393 - History of Theatre Design and Architecture Credits: 3
- THEA 450 - Internship Credits: 3 to 12
- THEA 490 - Independent

Study Credits: 1 to 3

- THEA 498 - Selected

Topics Credits: 1 to 3

## Degree Completion

in Four Years
Theatre (BA)

Completion Hours: 120

## Freshman Year -

Total Hours: 29

- PESM Activity - Credits:

1

- ENGL 101 - College

Writing I Credits: 3

- ENGL 103 - College

Writing II Credits: 3

- G\&ES 100 - Discover

Geography Credits: 3

- G\&ES 202 - United States
and Canada Credits: 3
- MUSI 101 - Introduction
to Music Credits: 3
- PSYC 100 - Psychology

Applied Credits: 3

- SPAN 101 - Spanish

Language \& Culture I
Credits: 3

- THEA 131 - Fundamentals
of Acting Credits: 3
- THEA 132 - Stagecraft Credits: 3
- THEA 151 - Rehearsal and Production Credits: 1

Sophomore Year -
Total Hours: 32

- ART 105 - Basic Studio

Drawing Credits: 3

- CHEM 104 - Introduction

Chemistry I Credits: 3

- COMM 200 - Public

Speaking Credits: 3

- ENGL 210 - Interpreting

Literature Credits: 3

- MATH 113 - Mathematics
as a Liberal Art Credits: 3
- PE 141 - Personal Physical Fitness Credits: 1
- PHYS 101 - Concepts of

Science I Credits: 3

- SPAN 102 - Spanish

Language \& Culture II Credits: 3

- THEA 151 - Rehearsal and Production Credits: 1
- THEA 215 -

Drawing/Drafting/CAD Credits: 3
or

- THEA 222 - Acting II

Credits: 3

- THEA 281 - Survey of Dramatic Literature Credits: 3
- THEA 337 - Directing Credits: 3

Junior Year - Total
Hours: 31

- BIOL 101 - General

Biology Credits: 3

- G\&ES 135 - Introduction
to Environmental Problems
Credits: 3
- PHIL 353 - Mysticism and

Psychical Research Credits: 3

- SASW 105 - Human

Diversity Credits: 3

- SASW 106 - Race and

Ethnic Diversity in the
U.S.A. Credits: 3

- SPAN 103 - Spanish

Language \& Culture III Credits: 3

- THEA 151 - Rehearsal and

Production Credits: 1

- THEA 235 - Costume

Technology Credits: 3

- THEA 324 - Stage Makeup

Credits: 3

- THEA 328 - Acting

Shakespeare Credits: 3
or THEA 151 -
Rehearsal and
Production Credits: 1

- THEA 332 - Advanced

Stagecraft Credits: 3

- THEA 333 - Scene Design

Credits: 3

- THEA 334 - Stage

Lighting Credits: 3
or

- THEA 335 - Costume

Design and History Credits: 3

## Senior Year - Total

Credits: 28

- PHIL 323 -
- Internship - Credits: 6
- Electives - Credits: 12
- THEA 151 - Rehearsal and

Production Credits: 1

- THEA 393 - History of

Theatre Design and
Architecture Credits: 3
or

- THEA 394 - Theories of Acting and Directing Credits: 3
- THEA 425 - Professional

Theatre Practice Credits: 3

## Specialization:

Design/Technology

- Credits: 27

Required Courses
Credits: 15

- THEA 215 -

Drawing/Drafting/CAD
Credits: 3

- THEA 235 - Costume

Technology Credits: 3

- THEA 333 - Scene Design

Credits: 3

- THEA 334 - Stage

Lighting Credits: 3
or

- THEA 335 - Costume Design and History Credits: 3
- THEA 393 - History of

Theatre Design and Architecture Credits: 3

## Electives

( 6 credits; 5 of the 6 must be 300 level or above)

- THEA 141 - Introduction to the Theatre Credits: 3
- THEA 222 - Acting II

Credits: 3

- THEA 269 - Playwriting

Credits: 3

- THEA 322 - Acting

Technique Credits: 3

- THEA 328 - Acting

Shakespeare Credits: 3

- THEA 329 - Shakespeare

Tour Credits: 3

- THEA 330 - Voice and

Movement for the Actor
Credits: 3

- THEA 332 - Advanced

Stagecraft Credits: 3

- THEA 334 - Stage

Lighting Credits: 3

* see footnote
- THEA 335 - Costume

Design and History Credits: 3

* see footnote
- THEA 345 - Stage

Management and Safety
Credits: 3

- THEA 355 - Projects in

Theatre Credits: 1 to 2

- THEA 394 - Theories of

Acting and Directing Credits: 3

- THEA 450 - Internship

Credits: 3 to 12

- THEA 490 - Independent

Study Credits: 1 to 3

- THEA 498 - Selected

Topics Credits: 1 to 3

## Footnote

*Courses may not be used to fulfill more than one requirement.

## President's

## Message

Dear Students:
Welcome to Slippery Rock
University of Pennsylvania!
Discover what a special place
this is!

You will not only find a beautiful, historic campus spreading over 600 rolling acres but also an interested faculty committed to helping you succeed both inside and outside the traditional classroom. The faculty at Slippery Rock University are dedicated to your learning experience. Our vision is to create for you a caring community of lifelong learners connecting with the world.

You'll find exciting possibilities. Our classes are taught by professors and not graduate students. You will participate in class discussions, work on group projects, and spend time with professors after class. You will find the latest technology to help you prepare for the complex demanding digital world. You will be offered internships and real-world experiences that prepare you for your career and for leadership opportunities.

You'll find exciting opportunities. Last year, over 250 of our students presented, exhibited or performed original works or research at regional, state, national and international professional meetings. For her research paper on how the media and dance education affect dancers' development of body image, Slippery Rock University dance major Melinda Planey received the 2005 Student Literary Award from the National Dance Association. For his essay on German philosopher Immanuel Kant,

SRU senior Brian Skibo received the $\$ 125$ first prize at the $18^{\text {th }}$ Pennsylvania State System of Higher Education Interdisciplinary Association for Philosophy and Religious Studies Conference, held recently at Mansfield University. These types of real life experiences are the opportunities that provide a link between the classroom and the world beyond our campus

Slippery Rock University honored more than 2,100
SRU students for their outstanding academic achievements for their academic and support work as part of this year's annual Academic Honors Convocation. Last year, we placed $96 \%$ of our graduates in either a graduate/professional program or on to the first step of their career.

Success at Slippery Rock University is all about choices: Choices you make to achieve your goals. We believe you control your destiny. Standing behind you are more than 800 members of our faculty and staff pledged to help you succeed.

Best Wishes,
Robert M. Smith
President

## Student Life

Each student is a person of dignity, worth and responsibility who has elected to attend the university for the purposes of
attaining an education and to grow and mature through additional learning experiences outside of the classroom.

The goal of the student life staff is to assist in the total development of each student by providing appropriate, life-centered educational programs and services. Primary concerns of the staff focus on helping students to develop leadership skills, decision-making competencies, self-discipline, respect for others, skills of self-evaluation, and the learning and development of social responsibility and human relations skills.

Entries appear in alphabetical order. Click on a link to be taken to the entry below.

- Academic - Musical Honor Societies Organizations
- Aebersold - Outdoor
Student Adventures

Recreation
Center

- Preschool Child Care Center
- Athletic -
- Counseling

Publications
Center

- Dining Television

Accommodations

- Religious
- Fraternities Organizations
and Sororities and Places of
- Health

Services - Residence
Life

- ID Cards
- Student
- Intercultural Government

Programs

| - Institute for | - Student |
| :--- | :--- |
| Community |  |
| Service |  |
| Learning, and |  |
| Nonprofit | - Student |
| Leadership | Standards |
| - Leadership - | Productions |
| Student | - University |
| - Center for | Police |
| Student | - University |
| Leadership | Program |
| - Freshmen | Board |
| Leader Scholar | - University |
| Program | Union |

- Dr. Helen
"Susie" Knierim • Women's
Leadership
Center
Institute, Reach
Program


## Academic Honor Societies

Alpha Psi Omega encourages excellence in dramatics on campus. Requirements for membership include active participation in technical work and acting. Invitation for membership is determined by the accumulation of points in the above areas.

Blue Key Honor Society recognizes primarily juniors and seniors for scholarhip, leadership and service to their campus and community. Students may be in any major course of study to be invited to join, but must have a 3.0 or higher QPA.

Delta Alpha Chi is an academic/professoinal organizton dedicated to the support and enhancement of the Student Personnel Master's Degree program. Membership is open to graduate students in the Student Personnel program.

Gamma Sigma Alpha exists to recognize the academic achievement of fraternity and sorority members at Slippery Rock University. Members of social fraternities and sororities who are juniors or seniors with a 3.5 or higher QPA may become initiated members.

Golden Key is an internationally recognized academic honor society dedicated to excellence. The society's goals are to recognize and encourage scholastic achievement and excellence in all undergraduate fields of study, to unite faculty and administrators in developing and maintaining high standards of education, to provide economic assistance to outstanding members by means of both undergraduate and graduate scholarships and to promote scholastic achievement and voluntary service. Membership is by invitation to juniors and seniors (in all fields) who have achieved a minimum 3.40 QPA.

Lambda Epsilon Delta recognizes outstanding elementary education majors. Students are required to have a 3.000 overall QPA after completing 60 semester credits in order to be eligible for membership.

Lambda Pi Eta recognizes currently enrolled full-time students in good standing majoring in communications Students are required to have completed 45 credits with a QPA of 3.000 and nine credits in communication courses with a 3.250 QPA.

Lambda Sigma honors sophomore students who have enriched campus life. The honorary is dedicated to the ideals of scholarship, leadership, fellowship, and service. Active members are chosen according to an election system approved by the national board and are initiated in the spring.

Mu Phi Epsilon is an international, professional music fraternity whose purpose is scholarship, musicianship and the promotion of friendship. The fraternity is open to music majors who have a minimum QPA of 2.500 with a minimum QPA of 3.000 in music subjects. Members serve the department by ushering, sponsoring concerts, and participating in community outreach programs.

Order of Omega recognizes students who have attained a high standard of leadership in InterGreek activities. It strives to bring together the most representative fraternity and sorority members with faculty, staff and alumni of the institution.

Omicron Delta Epsilon is the international honor society in economics and is a member of the Association of College Honor Societies. ODE promotes excellence in academic study by restriction of membership to upper division undergraduates who have a $B$ average and at least 12 credit hours of economics with an average grade of at least a B. ODE also publishes The American Economist, a journal that accepts manuscripts from graduate
and undergraduate students majoring in economics.

Phi Alpha Theta is dedicated to promotion of research, instruction, publication, and exchange of experiences among historians. Students maintaining high academic standards in history and general studies are eligible to become members. The RHO IOTA Slippery Rock Chapter has been selected best chapter in Division III for 1989-90 and 1990-91 school years.

Phi Epsilon Kappa recognizes outstanding health and physical education majors. Fraternity objectives are to elevate the standards, ideals, and ethics of those engaged in the teaching of physical education. Membership requirements include a minimum overall QPA of 2.750 and a 3.000 QPA in all major courses.

Phi Eta Sigma, invites all freshman men and women (from any field of study) who have a 3.500 cumulative average and have been enrolled for at least 14 credits to join the Alpha Chapter of Phi Eta Sigma. The honor society accepts for membership freshman students with superior scholastic achievement. All members of the society become lifetime members.

Phi Kappa Phi, the nation's oldest and most selective alldiscipline collegiate honor society, recently extended an invitation of membership to Slippery Rock University following a yearlong evaluation. SRU accepted and will initiate a chapter in the fall of 2004.

Founded in 1897, the Phi
Kappa Phi society stresses academic excellence and strength of character.
Membership in the society is by invitation. Invitations are extended to the top $7.5 \%$ of juniors and the top $10 \%$ of seniors, as well as outstanding members of the university's faculty, staff and administration.

Phi Sigma Pi is a national, coeducational honor society for all majors. Slippery rock University's Mu chapter was established in 1930, on the three ideals of scholarship, leadership, and fellowship. With this tripod the society strives to make all three ideals dynamic in the lives of its members. Consideration for membership requires the maintenance of a 3.000 QPA , and completion of twelve credits.

Phi Sigma Tau, the Pennsylvania Upsilon chapter of the philosophy honorary was established at Slippery Rock University in February 1984. The aims are expressed in the Greek motto "Philounton Sophian Time," meaning the "honor of those who love wisdom." The goals are to honor academic excellence and philosophical concern. Any student with a cumulative average of 3.000 in at least nine credits of philosophy courses and an overall cumulative average of 3.000 or better is eligible for membership.

Pi Delta Phi aims to recognize excellence in French studies. Members communicate French language and culture to others by tutoring and
sponsoring French cultural presentations. To be eligible to join, students must have completed one French course at the 300 level, have a B average in all French courses taken and a 2.900 overall QPA.

Psi Chi aims to provide academic prestige to members by high standards for eligibility, to offer a congenial climate for professional growth, and to make active attempts at nourishing and stimulating that growth. Basis for membership: (1) completion of twelve or more credits in psychology; (2) registration for major or minor standing in psychology or related program; (3) high standards in psychology or related program; (4) good academic standing; and (5) threefourths vote of approval for membership at a regular meeting of the chapter.

Psi Chi (Graduate Division) Graduate students are eligible to join Psi Chi after completing 18 semester credits in the counseling program, achieving degree candidacy, and obtaining a QPA of not less than 3.500.

Rho Phi Lambda honors students who have made outstanding contributions to the field of parks and recreation. Initiates must have completed 45 credits with a 3.000 QPA and nine credits of parks and recreation courses with a 3.200 QPA.

Sigma Delta Pi honors those who seek excellence in the study of Spanish language and literature. To become an
active member, a student must have completed at least two Spanish courses at the 300 level and have a 3.000 QPA in Spanish and a 2.750 QPA overall.

Sigma Gamma Epsilon is an honorary scientific society devoted to the earth sciences. Delta Tau Chapter holds regular meetings, sponsors field trips, lectures and community service in the earth sciences.

Sigma Rho Delta, the dance honorary, was founded in 1967 and established at SRU in 1998. The goals are to offer service to the department, university, and community; promote unity within the department and between departments; and to further dance and art awareness.

Sigma Sigma Kappa was established in 1981 to foster academic excellence in sociology, anthropology, and social work and to encourage community service. To be eligible for membership, students must have completed nine hours in SASW courses and have achieved a 3.000 QPA. In addition, students must complete ten hours of volunteer service in the community

Aebersold Student Recreation Center www.sru.edu/pages/6332.as

## p

Nicknamed the "ARC" by students, the 82,000 square foot facility provides many opportunities for students to "Rock and Recreate." The facility has been designed to accommodate a variety of
sports and activities while promoting positive physical, mental and spiritual health. Highlights of the "ARC" include:

- A 44-foot-high climbing wall leading into the main skylight. Students challenge their abilities, build trust and teamwork as they ascend to new heights.
- The Aebersold Student Recreation Center is the home of the Russell Wright Fitness Center offering numerous fitness and wellness avenues for students to enhance their physical well being. Equipment to develop cardiovascular fitness as well as enhance muscular strength and muscular endurance is available in the 7,714-squarefoot facility.
- Gym A, with four woodfloor courts, is a fun haven for basketball and volleyball. No longer do students need to wait until the late-night hours to access a gym for intramural sports, volleyball or basketball pick-up games.
- Enthusiasts of aerobics and floor hockey can step, funk, hip-hop and break away to Gym B. This gym has contoured corners for deck hockey and a special wood floor for aerobicizers.
- The Aquatic Center, with a pool ranging in depth from 3 to 9-feet, offers enticing and exciting water space for lap swimming, aqua-aerobics, water basketball, polo, and even "Dive In" movies. Plus, when the warm weather hits "The Rock," students can "catch some rays" on the 2,700-square-foot sun deck.
- Students can run, walk or jog their way to a healthier lifestyle on the indoor 200-
meter track. A warm-up stretching area accompanies the artificial surface track on the mezzanine. Let your mind wander when you exercise while you enjoy a scenic outdoor view.
- The student recreation center includes a lounge area for socializing as well as men's and women's locker rooms.
- The Rock Pride Mezzanine (RPM room) is a multipurpose area that hosts cycle aerobics, health and safety classes and golf.


## Athletic Programs www.sru.edu/pages/3716.as p

Always a strength at Slippery Rock University, the athletic program offers broad-based opportunities for students to participate. The belief that sports and physical fitness help to expand the scope of today's education has led to a strong institutional commitment to athletics. Three types of athletic activities flourish: Intramural activities attract students who want to participate in athletic competition with other students on campus. Seasonal schedules, tournaments, and special events are held between residence halls, fraternities, sororities, clubs, faculty, and commuting students. Intramural sports are provided for men and women separately, as well as together in coeducational activities. Approximately 28 sports are currently offered as intramural activities, and some sports have more than 1,500 students participating. Slippery Rock University has one of the most extensive
intramural programs in the country for a school its size.

Club sports provide the opportunity for competition with teams from other colleges and organizations but at a less formal level than the intercollegiate athletic program. Each club sport is under the supervision of a qualified faculty and staff member. Included in the present club sport offerings for men and women are cycling, lacrosse, judo, rugby, weightlifting and ice hockey. Volleyball is available for men and equestrian is available for women.

Intercollegiate athletics include a varied array of sports and make an important and meaningful contribution to the total educational objectives of the university. The strength of the SRU intercollegiate athletic program is its academic accountability, as well as its desire for excellence in all 23 of the university's varsity teams. The list of competitive, intercollegiate teams for women include cross country, tennis, volleyball, soccer and field hockey in the fall; basketball, swimming, and indoor track in the winter; water polo, softball, and track \& field in the spring. The men's sports include football, soccer, water polo and cross country in the fall; basketball, wrestling, swimming, and indoor track in the winter; and baseball, tennis, golf and track \& field in the spring. Slippery Rock University is a member of the Pennsylvania State Athletic Conference
(PSAC) and the National Collegiate Athletic Association (NCAA), Division II (Wrestling, Division I).

## Counseling Center 724-738-2034 www.sru.edu/pages/267.asp

Counseling is a collaborative learning experience between the counselor and the student. It encourages the students to utilize the processes of selfexploration and problemsolving to identify their strengths and needs, place needs in priority order, and to set goals for themselves. Through the process of counseling, students may increase their knowledge and understanding of themselves, their relationships with others, and with their environment. Psychologists and professional counselors are available to talk with students in a confidential manner about personal matters in the student counseling center, located in 008 Old Main. Twenty-four hour emergency services are also available by contacting either the McLachlan Student Health Center or University Police.

## Dining Accommodations www.sru.edu/pages/6097.as p

The dining program at Slippery Rock University offers a variety of services throughout the campus for students and their guests. Meal service is available somewhere on campus from 7:30 a.m. to 12:00 midnight (Sunday through Thursday) and 8:00 a.m. to 10:00 p.m. (Friday and Saturday).

Weisenfluh Dining Hall , located across from North Hall parking lot, features a food court with a variety of food stations. This all-you-care-to-eat facility offers something for everyone: hot entrees and ethnic foods, sandwich selection from the cold deli or hot grille area, pizza, vegetarian entrees, pasta and entrée salads made-to-order. Also available is a soup/salad bar, fresh baked breads, desserts including ice cream and frozen yogurt, and a variety of beverages. The Marketplace at Weisenfluh is a convenience store located in the lobby. Students may use cash, flex funds or Rock Dollars to make purchases from a large selection of prepackaged foods, snacks, boxed lunches, beverages, and pastries/desserts.

Boozel Dining Hall, located on the lower end of campus beside the University Union, provides a variety of menu options in a traditional dining atmosphere. The menu selection includes: homestyle and international entrees, vegetarian and healthy choice options, deli and grille sandwiches, pizza and pasta, specialty bars, soup/salad, and a variety of desserts and beverages. This all-you-care-to-eat facility also features take-out, special meals, holiday dinners, monotony beakers, and prize giveaways.

Taylor \& Byrnes, a coffee shop located in the lobby of the University Union, offers hot and cold beverages, smoothies, bakery treats, and gourmet chocolates. A Taylor \& Byrnes kiosk offers limited
service in the lounge of Bailey Library.

Rocky's Grille, located on the lower level of the University Union, is an a la carte snack bar featuring grille and deli sandwiches, pizza, salads and other grab-n-go items, desserts, and beverages. This operation also provides a delivery service to students who have contracted for a meal plan.

There are a number of meal plan options available to Slippery Rock University students. Students residing in a state-operated residence hall sign a housing/food service contract. Once signed, these become binding contracts. The only reason for exemption from the meal contract will be suspension or withdrawal from the university. Meal contracts are optional for offcampus/commuter students.

## Fraternities and Sororities www.sru.edu/pages/9413.as p

Slippery Rock University's national fraternities and sororities provide opportunities for fun, friendship, and learning. The primary purposes of these organizations are 1) educational excellence, 2) campus and community service, 3) leadership development, and 4) developing a friendship network. The Greek system at Slippery Rock University has played a positive role on the campus since 1961. For more information about fraternities and sororities call 724-738-2719.

Recognized Student Greek
Organizations are:

|  | National |
| :--- | :--- |
| North | Pan- |
| American | Hellenic |
| Interfraternity | Council |
| Conference | Fraternities |
| Fraternities | and |
|  | Sororities |


| Pi Kappa | Alpha <br> Kappa <br> Alpha <br> Sorority Inc. |
| :--- | :--- |
|  | Delta Sigma <br> Alpha Sigma <br> Theta |
|  | Sorority Inc. |

Phi Beta
Sigma
Pi Kappa Phi Fraternity,

Inc.

Zeta Phi
Theta Xi Beta
Sorority, Inc.

National
Panhellenic
Conference
Sororities

Alpha Omicron
Pi

Alpha Sigma
Tau

Alpha Xi Delta

Delta Zeta

Phi Sigma
Sigma

Sigma Sigma
Sigma

## Health Services www.sru.edu/healthcenter

Located along Campus Drive in Rhoads Hall, the McLachlan Student Health Center supports the university's mission by removing health related barriers to learning and promoting an optional level of wellness. A cost-effective, comprehensive, and holistic approach to health care is provided in a confidential setting. Primary care is provided by certified registered nurse practitioners in collaboration with a licensed physician. The health center is staffed by registered nurses, 7 days/week, 24 hours/day during the academic year (except scheduled break periods). Van transportation is provided when needed.

The facility includes an outpatient clinic, inpatient facilities, a health promotion department with educational resources, and a self care center. The student health fee covers routine care, which may include referral to the staff physician, medication, flu vaccine, in-patient care, educational material and the self-care center. The student is responsible for all additional medical expenses that may be required, such as lab tests, x-rays, referral to specialists or dentists, hospitalization and nonformulary medications. Specific questions can be addressed by calling 24-7382052.

## Absence Slips and Notification

The Student Health Center will provide written verification when a student is confined to his/her residence or the health center for 24 hours or longer. Written verification will be provided when a student is hospitalized if the health center is aware of the situation. The health center does not routinely issue statements verifying a brief student visit to the health center. No confidential information about the student's health status can be released without the student's permission.

## Health Insurance

All students are encouraged to be covered by health and accident insurance. While it is not mandatory to carry insurance, it is advisable. (Note: International students are required to carry health insurance and must make acceptable arrangements with the Office of International Initiatives.) Students may already have benefits through their family plan, an independent source, or elect to purchase student accident and sickness insurance made available through the University.

Students will receive a mailing regarding the purchase of accident and sickness insurance, or information can be obtained by visiting the Student Health Center or online at www.sru.edu/pages/366.asp. Coverage periods are available on an annual basis and per semester.

Insurance information should be included on the Health History form and submitted

# to the Student Health Center 

as part of the student's record.

## HOPE Peer Education Program (Healthy Outreach through Peer Education)

The HOPE program is one prevention method used by the Student Health Center to educate the student body on issues related to student health. Students are trained to provide educational programs for fellow students on issues such as high-risk alcohol consumption, date rape, stress management, healthy relationships, sexually transmitted infections, and communication skills. Students interested in becoming a peer educator should contact the Coordinator for Health
Promotion at 724-738-2670.

## Protection Connection

Developed in 1998 in response to student suggestions, the Protection Connection offers a variety of safer sex supplies to the student population. The purpose of this service is to encourage sexually active students to realize the importance of the use of barrier protection to reduce their risk of contracting infection. Supplies are available to students at cost. The Protection Connection is staffed by HOPE Peer Educators, trained students who are knowledgeable about sexually transmitted infections and risk reduction. The Protection Connection is located in the Student Health Center. Hours vary by semester.

## ID Cards

www.sru.edu/pages/252.asp
The SRU One Card is your official Slippery Rock University photo identification card and more! It offers you a convenient, easy, and safe way to make purchases and utilize campus services. The SRU One Card is your meal card; library card and activity card all rolled into one. For those students living in a residence hall, it provides access to your building. Money deposited in a Rock Dollars account (pre-paid debit account) is accessible with your ID card. When a debit account is activated, the SRU One Card works similar to a checking account in that the funds deposited into your account are debited each time you make a purchase. Rock Dollars may be used to purchase items/services in a number of locations throughout campus; SGA Bookstore, dining facilities, selected vending machines, residence hall laundry machines, selected publicaccess copiers, ticket purchases, and parking fees/fines. The ID card is also used as identification for cashing checks at the SGA Bookstore or in town and to withdraw materials from the library.

## Intercultural Programs www.sru.edu/pages/3709.as p

The Office of Intercultural Programs is a comprehensive office that assists with the educational and holistic development of students from a diverse population. The primary focus of the office is
to assist in the development of students who are able to compete in a diverse environment. It encourages exposure to the cultural richness found within color, gender, national origin, creed, lifestyle and sexual orientation. Retention and personal enhancement programs are instituted to promote academic success and professional development. For additional information call 724-7382700.

Institute for Community Service Learning, and Non Slippery Rock University students, joined by faculty, staff and others lead the way to make a difference. SRU's national recognized Institute for Community, Servicelearning, and Nonprofit Leadership operates a system for leveraging prepares young people, in partnership with their communities, to use personal strengths, academic preparation, and community resources to address pressing social needs. As a result of their interaction with the Institute's Care Break Program which offers a series of community service projects in cities across the United States, students connect intellect, classroom experiences, as well as interpersonal and personal passion to purposeful action that adds value to their lives. For additional information call 724-738-2414.

## Center for Student Leadership

www.sru.edu/pages/372.asp

The newly established Center for Student Leadership, located in the University Union, serves as a resource to students who want to get involved in campus life and who wish to develop and enhance their leadership skills. The Center offers a resource library (SOAR); a variety of student organization services (SOS); leadership conferences; SRU LEADS (Leadership Education and Development Seminars); co-curricular transcripts; and information about campus-wide leadership involvement opportunities. For more information regarding the Center for Student Leadership call 724-7384986.

## Freshmen

Leader
Scholar

## Program

## www.sru.edu/pages/5916.as

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The Freshmen Leader
Scholar Program (FLSP) is an opportunity for first year students to jump start their involvement in student organizations by providing a series of seminars, retreats, and experiences that improve
the participants leadership skills, and increases their visibility as emerging student-leaders on campus. Activities are structured to be interesting and fun. The program provides the students with a stipend of $\$ 250.00$ for successfully completing the program.

## Dr. Helen 'Susie" <br> Knierim <br> Leadership Institute, Reach Program

www.sru.edu/pages/9626.as p

REACH is a program at Slippery Rock University which gives students and student organizations experiential learning, team building and leadership development opportunities on a ropes course consisting of both high ( 30 ft .) and low (ground level) challenges. This program is free to student organizations, academic classes and varsity athletic teams. For additional information call 724-7382883.

## Musical Organizations

In conjunction with the regularly scheduled student and faculty recitals, the university maintains the following well-developed musical organizations, which
contribute to the wealth of fine music on the campus:

University Choir. Some 60 to 70 men and women, chosen by audition, study and perform the great choral literature from the Renaissance to the present. Concerts are presented on campus and on tours.

Symphonic Choir. This is a large ensemble, chosen by audition, which studies and performs the great choral literature.

Chamber Singers. This is a small ensemble of wellblended voices selected and trained for the performance of madrigals and other chamber vocal music.

## Marching Rocket Band.

The band performs during the half time at football games, both home and away, and for other special events. Much of its music is especially arranged.

Concert Band. The Concert Band members are carefully selected to provide a balanced instrumentation of the best players. Music written for the concert band is the main repertoire. Concerts are given by this group on campus and on tour.

Jazz-Rock Ensemble. The Slippery Rock University Jazz Ensemble performs jazz literature from all eras of jazz history including big band, bop, hard bop, fusion and contemporary. This ensemble often performs with guest artists of national and international stature, both on and off campus. Membership in this ensemble requires an
audition. Four and one-half hours of rehearsal per week.

Orchestra. The Orchestra is a symphonic-sized ensemble comprised of strings, woodwinds, brass and percussion. All string players are eligible. Woodwind, brass and percussion players are to consult with the director prior to registering.

## Chamber String Ensemble.

 The selected members of the Chamber String Ensemble study and perform chamber music written for strings.Brass Ensemble. The Brass Ensemble studies and performs music for brass from all historic periods. Members are selected after auditions.

Woodwind Ensemble. The
Woodwind Ensemble is a small, selected group of students who study and perform music for woodwind.

Gospel Choir. The Gospel
Choir is made up of students who enjoy singing Gospel music. The group sings on campus and goes on tour.

Outdoor Adventures www.sru.edu/pages/2662.as p

The outdoor adventures office is located in the Aebersold Recreation Center. Outdoor adventures sponsors a variety of outdoor programs throughout the year. Including, rock climbing, rappelling, canoeing, white water rafting, camping and mountain biking. Also available is the rental of outdoor equipment, such as cross country skis, tents, and
backpacking equipment, all at affordable prices. Programs and services are open to students, faculty and staff of SRU. For additional information call 724-7382620 or 724-738-2883.

Preschool Child Care Center The SRU/SGA Preschool and Child Care Center is a statelicensed, nationally accredited non-profit facility owned by Student Government Association, Inc. of Slippery Rock University. Services are available for children ages three to five of students, faculty, staff, and members of the Slippery Rock community. Children through age 12 are welcome for after-school care and for summer programs.

The Center is located at 007 McKay Education Building, and is open from 7:30 a.m. to 5:00 p.m., Monday through Friday. Service is provided year round.

Since the center is licensed by the Pennsylvania Department of Public
Welfare and accredited by the National Association for the Education of Young Children, all staff members are required to meet state regulations regarding training and experience. In addition to a professional staff, the center provides a rich variety of learning experiences that promote the physical, social, and intellectual development of each child. The staff seeks to provide each child with a safe, secure, happy environment and to provide parents with the knowledge and security that their children are being given
excellent care. To contact the Center personnel, please call 724-738-2102.

## Publications

Ginger Hill, which is one of the oldest and most distinguished American college literary journals, provides students with the experience of producing a high quality magazine.

Participating undergraduates solicit contributions of fiction, poetry, art, and photography; select and edit works for publication; and help develop layout, design, and typography for printing. Issued annually, Ginger Hill is funded by the Student Government Association.

Stone House Review is a journal of history and folklore dealing primarily with the western Pennsylvania region but also including other areas of interest. It is a student publication supported by university and student government funds. Although faculty members assist in editing and selecting works for publication, the history honorary, Phi Alpha Theta, is in charge of the annual publication. Contributors submit papers, book reviews, cartoons, artwork, or photographs, student editors arrange for publication and set up the final proof copy.

History of Education Quarterly is a renowned forty-three-year-old scholarly journal of the History of Education Society, which maintains an international scope and readership. It has been published in cooperation with the College
of Education since 1997. Its editor and staff, as well as many reviewers, are members of the SRU and SSHE communities. Contributors from all parts of the world submit article-length manuscripts, symposia, roundtables, essay reviews, book reviews, and book notes. It appears in both print form, through individual and institutional subscriptions, as well as in a digital format through History Cooperative and JSTOR (Journal STORage).

## Radio and Television

 WRSK RADIO - 88.1 FM is a student-operated university radio station serving the campus community. Its format consists of popular contemporary artists, rock and roll, progressive rock, music and concert news, special features and local, national and international news and sports. WRSK operates at 100 watts serving the Slippery Rock area throughout the academic year and broadcasts from 8 a.m. to midnight when classes are in session.Television Production Studio - The all-digital Television Studio, a three-camera color facility, located at 101 Vincent Science Hall, is a newly remodeled facility with a control room, audio production booth, and the studio. The television news: studio production, television news: field production, and the broadcast announcing classes use the facility as a component of the broadcast journalism curriculum. The offices of the student production organization,

WSRU-TV, are also located at the facility. This student organization produces news and interview programs for distribution on the campus cable network.

Religious Organizations and Places of Worship
Students may find worship,
fellowship and other religious
experience opportunities
through the following groups:

| Local | Latter Day |
| :--- | :--- |
| Churches | Saints |
|  | Branch |


| All Saints | Newman |
| :--- | :--- |
| Lutheran | Center |
| Church | (Roman |
|  | Catholic) |


| Center United | St. Peter's <br> Church |
| :--- | :--- |
| Presbyterian | (Roman |
| Church | Catholic) |


|  | Christian <br> Chissionary |
| :--- | :--- |
| Church of the | Alliance |
| Epiphany | Church of |
| (Episcopal) | Slippery |
|  | Rock |


|  | Slippery |
| :--- | :--- |
| Church of the | Rock |
| Nazarene | Baptist <br> Church |


| Congregation | United |
| :--- | :--- |
| Methodist |  |
| B'Nai | Church of |
| Abraham | Slippery |
| (Jewish) | Rock |


| Grace | Zion |
| :--- | :--- |
| Tabernacle | Baptist |
| (Assembly of | Church |
| God) |  |

Highland
Presbyterian
Church

# Mount Olive <br> Baptist <br> Church of <br> Grove City 

Campus
Organizations

All Saints
Fellowship

Campus
Crusade for
Christ

Coalition for
Christian
Outreach

Fellowship of
Christian
Athletes

Newman Club

Send Jud'ah
First

SRU Gospel
Choir

Christian
Bible Rap
Sessions

A directory of these and other area worship congregations is available courtesy of the Newman Center at 724-7948459.

Catholic Campus Ministry at SRU is operated through the Newman Center, located at 342 Normal Avenue (across from Old Main), which is owned and operated by the Roman Catholic Diocese of Pittsburgh. An outreach center to the university community, the Newman

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Center offers open hospitality, including rooms for study, relaxation, meetings, worship and programming. It aims to be a place of education, of fellowship, or prayer and of faith formation. While welcoming individuals regardless of religious affiliation, Catholic Campus Ministry particularly seeks to support and nourish SRU's Catholic students, faculty and staff as they strive to live their faith in the context of university life. The Newman Center is currently staffed by Rev. James L. Armstrong, D.Min (Director), Mrs. Diane Magliocca (Campus Minister). For more information regarding Mass schedules and ministry programs, call 724-794-8459.
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## Residence Life

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Residence Life supports student growth and development in the residence halls. The philosophy of university residence halls at Slippery Rock University is educational and intended for student development that maintains that residence halls are not merely places to eat and sleep, but rather, communities in which students grow and develop. This development occurs in out-of-class learning experiences through participation in various activities assisting development at a personal, social and academic level. To achieve these objectives, the Residence Life staff offers varied programs that provide residence hall students
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opportunities to meet a wide variety of needs. Full-time professional staff members known as Residence Life Coordinators (RLC) supervise the on-campus residence halls. Residence Life Coordinators have a master's degree in college student personnel, counseling or related field. Additionally, each residence hall floor has a community assistant available to provide educational and social programs assist in the operation of the facility, offer support for the residents, and be available for emergency purposes. These persons are full time students who have been selected for their skills and ability to be academic and personal role models.

The Office of Residence Life provides ten living learning communities for residence hall students. The communites referred to as Resident Commons (academic oriented) and Residential Interest Floor (personal interest) offer an opportunity for students to apply to live in a designated community with other students who share similar interests and majors. Information regarding the living learning communities is provided when students submit their housing agreement materials.

Residence Life is responsible for housing students who select to live in a universityowned residence hall. All freshmen, except those who live with their parents or legal guardians within a reasonable commuting distance, are required to live
on campus. While the University provides housing for non-traditional students, freshmen over the age of 21 may request permission to live off campus. All such requests must be sent in writing to the Office of Residence Life when the advanced tuition deposit is submitted. The Housing Appeals Committee will review all requests. During the month of January, residence hall room request cards for the following academic year are given to all students residing on campus.

Slippery Rock University has students representing many creeds, races and ethnic groups living in university residences. Therefore, in compliance with the Pennsylvania Fair Education Practice Act, all residence assignments are made without regard to race, religion, color or national origin. Having accepted the Act, the university believes that a cross section of cultures provides a pluralistic community environment.

There are eight universityowned residence halls and one apartment complex, housing approximately 2,800 men and women. Currently, one hall is assigned to women, and seven are coeducational by floor or wing. Apartments are single sex. Because of limited space, students cannot be guaranteed housing on campus for their full four years.

Residence hall rooms and apartments are furnished with beds, chairs, desks, and window covers (shades). The
beds are supplied with a mattress only. Students furnish their own blankets, pillows, towels, bedspreads, dresser covers, pillowcases, and sheets. Students may bring their own drapes and other accessories to personalize their living environment. Self-service laundries are available in each apartment building and residence hall. Lounges, recreation areas, TV lounges, and computer labs are available in each hall. All residence halls have microwaves available for students to cook snacks and all have kitchen facilities for use by occupants of the building.

Campus residence halls will be closed to all students during university vacation periods and also between summer sessions and semesters. All students will be expected to leave the residence halls no later than 24 hours after their last examination. A designated residence hall will be open for summer sessions.

Students who reside in university-owned residence halls must contract to eat in the university dining facilities. No extensive cooking is permitted in the residence halls.

## Policy for Withdrawals

Students must vacate their rooms within 12 hours of withdrawal from the university, unless written permission is received to remain for a longer time period.

## Housing, Off-Campus

Off-campus housing is available in privately owned residence halls, apartments, rooming houses and mobile homes. The University does not inspect or approve offcampus housing. Housing within the borough of Slippery Rock must comply with the housing code for property maintenance of the borough, which sets legal standards for safety (sanitation, freedom of hazards, etc.) and livability (water, ventilation, heat, etc.). Housing in the township does not fall under the jurisdiction of the Slippery Rock Borough zoning laws, but it must meet minimal health standards as determined by Butler County.

In addition to this housing, a number of rooms and apartments are available in the community. Off-campus housing lists are available on the Residence Life website. Students who live off campus may contract to eat in the university dining facilities.

The Office of Residence Life serves as a mediator in landlord-tenant problems for students living off campus. Students desiring assistance should contact the housing office at 724-738-2082 to schedule an appointment with the director. The Student Government Association also retains an attorney to assist students with various concerns.

Student Government Association www.sru.edu/pages/253.asp

All students, by virtue of their undergraduate registration and payment of fees, are members of the

Student Government
Association. The Student
Senate is the central
representative and legislative
organization of the university
Student Government
Association. The Student
Senate recommends to the university the recognition of student organizations, allocation of the General Service (Activities) Fee money, and carries out other responsibilities as included in the Student Government Association constitution.

The role of the SGA is to act as an advocacy group for the students of SRU in order to ensure a healthy academic and social environment and to provide such services to the student body.

## Student Organizations www.sru.edu/clubs

Student organizations at Slippery Rock University are viewed as opportunities for self-development and selfexpression. Therefore, the success of student activities rests largely with the students. Students are encouraged to become involved in organizations as their time and interest warrant. There are more than 125 organizations, activities, and teams, which have been created from student interest. The scope of the organizations includes athletics, drama, music, service, social, scholastic interest, the media, academic honoraries, governance and special interest groups. A variety of resources and workshops are available to assist student organization members with developing and enhancing their
leadership skills. For more information about student organizations call 724-7382719.

## Student Standards www.sru.edu/pages/380.asp

Slippery Rock University is an academic community in which there is mutual respect and trust of the persons who learn, teach, and work within it. Students of Slippery Rock University are entitled to certain rights and privileges which must be protected through fair and orderly processes and which are best safeguarded when each student acts responsibly. All students of the university community are equally entitled to the protection of the code of conduct. Students are expected to be familiar with the provisions of the Code of Conduct. Copies of the code are available in the Office of Student Life (B-105 University Union). For information call 724-738 2092.

## Theatre Productions

The Department of Theatre sponsors an active cocurricular program, partially funded by student activity fees. Each year it presents a season of faculty-directed productions: a balance of Broadway hits, new plays, classics of the world theatre, and, occasionally, a musical.

Participation in the program is open to any interested student and is not confined to theatre majors. A chapter of Alpha Psi Omega, the national collegiate dramatics honorary, selects its members
based on commitment and achievement in the theatre.

## University Police

All university community members have the responsibility to create and maintain a safe environment to live, work, and learn. The university police department has the responsibility to enforce the law and university policies to maintain campus safety. In addition to the enforcement of law and university policy, the university police department performs other functions such as investigations (criminal, traffic, and accidents), open and secure buildings, provide emergency first aid, monitor and respond to fire and intrusion alarms, provide a communication desk for information and emergency purposes, patrol grounds, provide escorts, and other responsibilities as determined by the administration.

The department has a complement of 16 commissioned officers that provide 24-hour, year round coverage. All university police officers are commissioned by the Governor of Pennsylvania and carry full police powers pursuant to the provisions of the Act of April 9, 1929, P.O. 177 known as "The Administrative Code of 1929" as amended. This includes, but is not limited to, the authority to arrest and issue citations. All officers have completed basic municipal police training as administered by the Municipal Police Officers

Education and Training Commission.

Officers receive additional training through mandated updates and special training seminars. They are recertified, as required, in first aid and CPR. The officers must qualify with their side arms and auxiliary weapons three times each year.

The department has conformed with uniform crime reporting procedures since 1970 , submitting monthly reports to both federal and state governments. For a more complete analysis of the reports submitted, see "Crime in the United States" published by the U.S. Department of Justice. We also conform to "CLEARY" and "Security Policies and Procedures" mandated by Federal and State Legislation. Please see our web site: www.sru.edu/pages/4668.asp or contact us for a brochure.

All criminal or suspicious activity should be reported to a law enforcement agency. Slippery Rock University police department is the law enforcement agency of record for the campus.

Federal regulations require an official of the institution who has significant responsibility for student activities, but does not have significant counseling responsibilities, to report criminal offenses to law enforcement authorities.

University police routinely report maintenance problems regarding safety and security. They also suggest
improvements pertinent to crime prevention.

The university police department has developed programs addressing personal and property safety for students and staff. Some of these programs or parts of them have been incorporated into student and staff orientations. Individuals or groups seeking information concerning the availability of literature or presentations are urged to contact the University Police Department.

As a fully authorized police force, an ability to assist neighboring police departments exists. Continued liaison with federal, state, and local law enforcement agencies promotes the exchange of information concerning criminal activity at on and off campus sites. This sharing of information greatly enhances the ability of law enforcement agencies to perform more efficiently in an effort to provide a safe community

All vehicles parked on university property must be registered and display a current and properly mounted parking permit. All students are permitted to have vehicles on campus provided the vehicles are registered and have the proper decals and assuming the operators maintain good standing with regard to their parking privileges. Failure to comply with parking regulations is dealt with in accordance with the procedures contained in the University Parking and Traffic Regulations. To
contact the University Police, please call 724-738-3333.

University Program Board www.sru.edu/pages/6826.as p

The University Program Board (UPB) is the major cocurricular sponsor of student activity events. It consists of seven specialized committees and an executive position, all occupied by students, who provide varity of entertainment programming for the campus community. The seven committees are: Arts and Entertainment, Major Events, University Events, Cultural Diversity, Lectures, Public Relations and Weekend Events. The University Program Board invites you to enjoy their many events. Most events are free of charge for SRU students. All students are encouraged to become a part of this exciting student organization and help create campus entertainment. For additional information, call 724-738-2729/2723 or visit the office located in B-122 on the main level in the University Union.

## University Union www.sru.edu/pages/376.asp

The University Union is the center of the campus community. It functions as the "living room" of the campus where students, faculty and staff can meet and talk informally. The Union provides services, facilities, educational and recreational programs, and cultural and social opportunities that enhance the quality of life on campus. The following are located in

the University Union: Center for Student Leadership (leadership programs, campus activities, Greek affairs, student organization services), Office of Intercultural Programs, Office of the Assistant Vice President for Student Development, Judicial Affairs, University Union Operations (scheduling), Cooperative Activities, Student Government Association (SGA), Cultural Center, WRSK Radio station, University Program Board (UPB), Taylor \& Byrnes coffee shop, Rocky's Grille, SGA Bookstore and Copy Corner, Rocky's Den (indoor recreation area/lounge), commuter lounge, computer lab. For additional information call 724-7382644.

## Women's Center www.sru.edu/pages/1024.as p

The Women's Center, located at 007E Strain Behavioral Science Building (BSB), is an on-campus resource center that exists to promote equality and respect for women. The Women's Center serves students, staff, faculty, and community members by providing information, referrals, and programming on issues related to the empowerment of women. In addition, the Women's Center offers women and men a safe, comfortable environment in which to study, talk, or to simply relax between classes. The Women's Center also serves as the meeting place for various student organizations and support groups. It is the home of the

# Tuition, Fees and Financial Policies 

By accepting admission to the Slippery Rock University, the student agrees to pay the fees and charges assessed by the university. Tuition, fees and other charges are subject to change at any time. Students cannot enroll in classes, receive transcripts of coursework taken while at the university, or graduate from the university unless all fees are paid. Past due account balances are submitted to the Attorney General's office for collection. If any account is submitted to a collection agency to assist in collecting the account, the student is responsible for any/all collection costs associated with this account. Payment of fees can be made in a variety of ways either in full or through installment payment plans (fee involved).

Click on a link to be taken to the entry below.

| - Tuition | - • Health |
| :--- | :--- |
|  | Services Fee |
| - |  |
| Pennsylvania | - |
| Residents | Miscellaneous |
|  | Fees |


| - Non- | - Room and |
| :--- | :--- |
| Pennsylvania | Board Fees |
| Residents |  |
|  | - Student |
| - Fees | Community <br>  <br> - Academic |
| Building Fee |  |
| Enhancement | - Technology |
| Fee | Fee |
|  |  |
| - Aebersold | - Tuition/Fee |
| Student | Regulation |
| Recreation | Policy |
| Center Fee |  |
|  | - Financial |
| - General | Aid Timeline |
| Service |  |
| (Student |  |
| Activities) |  |
| Fee |  |

## Tuition

Slippery Rock University is a one of fourteen universities in the State System of Higher Education. The tuition rate is determined by actions by the Board of Governors of the State System of Higher Education.

## Pennsylvania Residents

To attend Slippery Rock
University, full-time students (students who are registered for 12 or more credit hours) who are legal residents of the Commonwealth of Pennsylvania pay a basic fee per semester for a maximum of 18 credits. Students who are permitted to carry more than 18 credits are charged for each additional credit. Part-time students (students who are registered for 11 or few credits) or extension students who are Pennsylvania residents pay a

# Non- <br> Pennsylvania Residents 

Students who are not legal residents of Pennsylvania and who are full-time students (students who are registered for 12 or more credit hours) pay a basic fee per semester for a maximum of 18 credits. Students who are permitted to carry more than 18 credits are charged for each additional credit. Part-time students (students who are registered for 11 or few credits) who are not legal residents of Pennsylvania pay for each credit. These rates apply to all curricula. For current information, please contact the Office of Student Accounts at 724-738-2088.

## Fees

## Academic Enhancement

## Fee

This purpose of this fee is to support academic activities that enhance and extend the traditional instructional activities of the classroom. The fee is $10 \%$ of in-state tuition.

# Aebersold Student <br> Recreation Center Fee 

Slippery Rock University students voted to establish this fee beginning in the fall semester of 1994. The fee is used to fund the construction and operation of the Aebersold Student Recreation Center. The fee is $\$ 7.25$ per credit hour up to a maximum of $\$ 87.00$ per semester. This fee also provides access to the Russell Wright Fitness center located in the student recreation center.

## General

 Service (Student Activities)
## Fee

This fee helps to cover the admission of each full-time student to athletic events, concerts, lectures, dramatic events and to support student organizations on campus. The fee is $5.25 \%$ of in-state tuition. Summer session students pay a General Service Fee of $\$ 1.25$ per week for the summer sessions.

## Health

Services Fee

This fee of $\$ 104$ per semester supports the student health program including unlimited office visits for illness, injury and preventative care, walkin urgent care service, inpatient service, and a comprehensive campus-wide health education service. Part-time students are assessed a health fee of $\$ 8.65$ per credit hour. The same rate applies to summer.

## Miscellaneous

## Fees

Advance Deposit for Basic
Fee
This $\$ 90$ advance fee is assessed to each new and transfer student at the time they make a firm commitment to attend Slippery Rock University.

Advance Deposit for Residence Hall This \$130 advance deposit fee is assessed all students at the time they make a firm commitment to reside in a university-owned residence hall. When the deposit is received, accommodations are reserved in the student's name.

Alcohol Education Program Charge
Students who violate the university alcohol policy are charged either $\$ 45$ or a $\$ 60$ depending on the nature of the incident.

Application Fee - Physical Therapy Program
This $\$ 35$ fee is to accompany the application for admission to the physical therapy program.

## Application Fee - <br> Undergraduate

This $\$ 25$ fee is to accompany
the application for admission
to the physical therapy
program.
Certification Fee
This $\$ 15$ fee was established by and is submitted to the Pennsylvania Department of Education for processing teacher certification applications.

Credit by Exam Fee (Per Credit)
This $\$ 50$ fee is assessed to students to take a universitydeveloped examination in order to receive credit for a course without participating in the class.

Career Assessment Students pay this $\$ 10$ charge when they purchase a career assessment package containing three vocational interest inventories.

## Graduation Fee

This $\$ 20$ fee is assessed students to cover the costs of the diploma, leatherette presentation case, reception and other services related to commencement exercises. Not transferable or updateable.

Gynecological/Contraceptive Service Charge
This annual $\$ 75$ fee is optional and provides for a supplemental service at the university health center to female students for pap smear, contraceptives and follow-up care.

Identification Card Charges
The orientation fee includes $\$ 15$ for the student's initial identification card. The
student is charged $\$ 15$ for the first replacement card and $\$ 20$ for each subsequent card.

Installment Payment Plan A $\$ 25$ processing fee assessed students who do not pay their charges in-full by the first billing due date and who choose to pay through the university's installment payment plan.

Late Drop/Add/Withdrawal This $\$ 15$ fee is assessed on students who drop, add, or withdraw from classes after the university's stated deadlines.

Late Payment/Bad Check Charge
A $\$ 15$ charge assessed to students who do not pay fees and charges by the designated due date or who issue a check for payment which is returned to the university for insufficient funds.

Late Registration Fee A $\$ 10$ fee is assessed to students who register for a course after the designated registration period has ended. This fee is charged for each course added.

Library Overdue Book Fine Students are assessed a overdue book fine of $\$ 0.05$ per day for books due in 3 weeks and $\$ 0.10$ per day for books due in 1 week.

## Non-Credit Basic Fee

This is a variable fee that is assessed for non-credit coursework such as for workshops. The fee varies according to the length, content, or other feature of the experience.

## Orientation Fee

All new degree seeking freshmen and transfer students are assessed a nonrefundable $\$ 90$ fee ( $\$ 75$ for orientation and $\$ 15$ for the student's identification card) that is collected through the advance deposit. Attendance is mandatory for all new freshmen and transfer students.

Overnight Charge Per Campsite Per Night The charge that assessed persons visiting the campus who prefer to bring campers/trailers for overnight accommodations is $\$ 5$ for a non-electric setup and $\$ 7$ for an electric setup.

Parents/Spouses of New Students
A $\$ 25$ fee is assessed a student's parent or spouse for participation in an orientation program.

Parking Decal
A $\$ 25$ charge is assessed students for automobile registration.

Parking Tickets
A $\$ 15$ charge is assessed persons who park illegally on the university campus.

Pre-Professional Skills Test (PPST)
Students who enter an educational certification program are assessed a $\$ 35$ fee to take the preprofessional basic skills test in reading, writing and mathematics.

Room Change Charge This $\$ 25$ fee is assessed to students for a studentinitiated room change in
residence hall after fourth week of class.

Transcript Fee
A \$3 fee (\$10 for same day service) is charged to prepare and mail each transcript. Every graduating student receives a complimentary copy of the transcript; each subsequent transcript charged at the established rate. An additional \$5 (\$12 for the same day service) is charged when documents are faxed.

Transient Guest Room Charge
Students or others who are guests at and visiting the university may stay in a university residence hall. A $\$ 22.50$ per night fee is charged for a double occupancy room and $\$ 25.75$ for a single occupancy room.

## Room and

 Board Fees
## Board Fees

Students who reside in a university-owned residence hall are required to take a meal or board plan through the university food services. Students who live in offcampus housing also may purchase a board plan and eat in the university dining halls. The dining halls are available to students only when the university is officially in session.

Room Fees
All freshmen are required to live on campus. Freshmen students who live with their parents or legal guardian and live within a reasonable commuting distance may
request release from this requirement in order to commute from home. All written requests for this exception will be reviewed by the Residence Life Housing Appeals Board.

Freshmen and returning students who live in university housing, must sign a Residence Hall Agreement or contract that is binding on the student (or his/her guardian if the student is under 18 years of age) for the entire academic year. The Residence Hall Agreement must be accompanied by a required advance deposit. The advance deposit is credited to the spring semester room fee. The advance deposit must be paid by a check or money order made payable to Slippery Rock University (cash cannot be accepted), and the student's name and social security number is to be printed on the check or money order.

- A student's written notice of his/her intention to withdraw from Slippery Rock University or his/her desire to be released from the Residence Hall Agreement must be received by the housing office prior to the last day of final exams week in May for a $\$ 75.00$ refund.
- A student's notification to withdraw from the university that is received after the last day of final examination week in May results in the students' forfeiture of the entire $\$ 130.00$ advance deposit.
- A student's request for release from the Residence Hall Agreement for the
forthcoming academic year that is received after the last day of classes in May cannot be guaranteed. Any request for release from the residence hall agreement must be submitted in writing to the housing office; a release request form can be obtained from the housing office. The Housing Appeals Board determines whether the release is granted and notifies the student of its decision.
- Students who paid the $\$ 130.00$ advance deposit to reserve a room for the forthcoming academic year and who are academically suspended at the end of the spring semester or summer session will receive a refund of the $\$ 130.00$ deposit.
- Students who withdraw, are released, or are academically suspended at the end of the fall semester are not entitled to a refund of the $\$ 130.00$ deposit.
The Residence Hall room fees per semester are available by calling Residence Life at 724-738-2082.


## R.O.C.K. Apartment Complex

Upper class students can reside at the ROCK apartment complex. A lottery type system that is based on a student's credit hours is used to select the students who will reside in the apartments. A non-refundable advance deposit fee per student is required. The per semester fee includes electricity, gas, and water. Refunds for students withdrawing during the semester are prorated according to the university's refund policy. Any moneys due the university are deducted before a refund is processed. Students who
reside in the ROCK apartments may choose to purchase a university meal plan, but are not required to do so.

Privately Owned Residence Halls
A listing of privately owned residence halls and their fees is available from the Office of House and Residence Education.

## Student Community Building Fee

Mandated by state law, this fee is required to retire the general obligation bonds for the University Union building. The amount paid is determined by the number of credits taken and is pro-rated as follows: 1-6 credits, $\$ 6.25$ per semester; 7-9 credits, $\$ 12.50$ per semester; 10 or more credits, $\$ 25$ per semester. The Summer Session fee is 1-3 weeks, \$3.50; 4-6 weeks, \$7.

## Technology

## Fee

This fee was established by the Board of Governors of the State System of Higher Education. The fee is $\$ 31.00$
for part time PA resident students or $\$ 62.50$ for full time PA state resident students. The fee is $\$ 47.00$ for part time, non resident students or $\$ 94.00$ for full time non resident students.

# Tuition/Fee Regulation 

Cancelled Course or
Workshop
A refund of all fees is paid
for a cancelled course or workshop.

Installment Payment Plan
The Slippery Rock
University Installment
Payment Plan provides
students and/or their parents or guardians the opportunity to complete payment of financial obligations through a four-installment program.
The fall and spring semester billing packages that are sent in July and December, respectively, may be divided into four installments each. The fall semester installment payments are due in August, September, October and November. The spring installment payments are due in January, February, March and April. To enroll in the Installment Payment Plan, simply pay the Plan B amount at the bottom of the billing statement. An additional fee of $\$ 25$ per semester is assessed to cover the administrative costs of operating the Installment Payment Plan. Although interest is not charged against the outstanding balance, a $\$ 15$ late payment fee is assessed if a payment arrives after the due date.

## Payment of Fees

By accepting admission to the university, the student agrees to pay all fees and charges assessed by the university. Prior to the start of each semester, a billing statement is mailed to students who have preregistered. Students will
have the option to pay in full or utilize SRU's installment plan. Payment must be made by the due date on the billing statement. The university reserves the right to deny registration or release transcripts and/or diploma if any bill remains unpaid. Unpaid bills may be referred to the PA Attorney General's Office for collection. Other collection agencies may be utilized. The student would then be responsible for the original amount owed plus any collection costs incurred.

## Refunds

The refund policy applies to all students (undergraduate, graduate, credit, and noncredit) and all terms (regular semesters, summer school, mini-courses, and workshops). It applies only to fees paid directly to the university. It does not apply to fees paid to others, such as off-campus housing and insurance.

Scheduled Course or Workshop is Changed by the University.
If the student elects not to attend the university, a full refund of all fees paid for the course or workshop that has been changed will be made.

Students Refused
Readmission for Academic Reasons.
Student will receive a refund of all fees paid for the new semester or term.

Withdrawal from the
University on or Before the First Day of Class of a Semester, Summer Sessions or Workshop.

## Academic Year Withdrawal Refund Policy

- Written notice. The student must notify the Office of Retention Services in writing, and this notice must be received not later than the first class day.
- Withdrawal from the university means that the student is withdrawing from all courses for a semester or summer session. When the student withdraws from some courses but remains in the university, refund is computed as in OVERPAYMENT section at the end of this policy.
- All fees paid for this semester, summer session or workshop will be refunded except the application fee. Withdrawal from the University After the First Day of Class of a Semester, Summer Session or Workshop. The student must complete the official withdrawal procedure.
- The basic fee, general service fee, academic enhancement fee, recreation complex fee, and health service fee will be refunded based on the percentage scale of refund. Residence hall and dining hall charges will also be refunded based on the percentage scale of refund listed below. In addition, students will forfeit the $\$ 130$ room deposit and will be charged a $\$ 25$ administrative dining hall fee.
- The application fee, community building fee, late payment fee, installment payment plan fee, and advanced tuition deposit will not be refunded.
- Regular Semester:
- Voluntary withdrawal. The university will refund the following percentage of all fees in section A above, when the termination is during the weeks shown below for all students.
Weeks
1 week $90 \%$
2 weeks $80 \%$
3 weeks 70\%
4 weeks $60 \%$
5 weeks $50 \%$
No refund after week 5

This refund policy is in compliance with the policy mandated by the Board of
Governors of the State
System of Higher Education.

- Students withdrawing from the university for any reason will forfeit $\$ 55.00$ of their residence hall deposit for the upcoming academic year if the withdrawal occurs before the last Friday in May, if the withdrawal occurs after the last Friday in May, the $\$ 130.00$ deposit will be forfeited.

Return of Title IV funds (Federal Aid/Loans). The federal government requires Slippery Rock University to return financial aid money to the Title IV programs for any student withdrawing through 60 percent of the semester. Student withdrawing with Title IV aid may owe the university a balance once the aid is returned. Title IV aid must be returned to the Title IV program before any refund can be returned to a student.

Summer Sessions
Withdrawal/Refund Policy

- Withdrawal on
or before the First

Day of class: A student may obtain a full refund if the registration is officially cancelled through the Office of Academic Records and Summer School on or before the first day of class for the summer session.

- Withdrawal on
or after the First
Day of Class:
Voluntary
withdrawal:
Students
withdrawing after the first day of class will have refunds processed based on the following: Withdrawal after the first day of class through 7 percent of the enrollment period will be refunded 90 percent of the institutional charges.
Withdrawal after 7 percent of the enrollment period for which the student has been charged through 13 percent of the enrollment period will be refunded 80 percent of institutional charges. Withdrawal after 13 percent of the enrollment period for which the student has been charged through 20 percent of the enrollment period will be refunded 70
percent of institutional charges.
Withdrawal after
20 percent of the enrollment period for which the student has been charged through 27 percent of the enrollment period will be refunded 60 percent of institutional charges.
Withdrawal after
27 percent of the enrollment period for which the student has been charged through 33 percent of the enrollment period will be refunded 50 percent of institutional charges.
There will be no refund for students withdrawing after 33 percent of the enrollment period has passed.

Dates, which apply, to these percentages may be obtained by calling the Office of Student Accounts and/or they will be printed on the back of each summer billing statement. Each summer session will be treated as a separate enrollment period for refund calculation purposes.

After the cut-off, no basic tuition and
fees will be refunded. Refund of Residence Hall rent and meal Plan fee will be based on the dates and percentages listed above. The Student Community
Building Fee is not refundable after the first day of class.

Charges for withdrawal from an Internship will be calculated on an individual basis. The internship start date, scheduled length of the internship and the date of withdrawal from the internship will determine the charge/refund.

Return of Title IV funds (Federal Aid/Loans). The federal government requires Slippery Rock University to return financial aid money to the Title IV programs for any student withdrawing through 60 percent of the semester.
Student
withdrawing with Title IV aid may owe the university a balance once the aid is returned. Title IV aid must be returned to the Title IV program before any refund can be returned to a student. Overpayment of Account with

Student Remaining
in University:
When the student's
account is overpaid
for one of the
following reasons,
the unearned fees
will be refunded.

- Reduction of the number of credit hours when the student is paying on an hourly basis:


## - Regular

Semesters - The percentage of tuition refunded for the credits dropped will be as stated under "Regular Semester Voluntary Withdrawals" in the section of this policy concerning withdrawals from the university after the opening date of regular semester.

- Summer

Sessions - The percentage of tuition refunded for credits dropped will be as stated under Summer Sessions Withdrawal Refund Policy.

- Approved withdrawal from the residence hall and/or dining hall (applicable only when withdrawal is pre-approved by the appropriate vice president or designee). The student will be charged the percentage indicated under Regular Semester

Voluntary
Withdrawals.
Suspension or
Dismissal from
University other
than for Reasons of
Academic Standing.
No refund will be
made to any such
student; all money
paid will be
forfeited.

- Residency Status

Policy
Students who enter
Slippery Rock
University with an out-of-state address will generally continue to be classified as nonPennsylvania residence for tuition programs during their years at the university.
An exception is made if the student's parents establish a legal residence in Pennsylvania. Establishing a Pennsylvania mailing address and obtaining a certificate of registration for voting purposes, however, does not change a student's out-of-state status for tuition purposes as long as their parents reside out-of-state. Neither does establishing a residence with a relative who is a Pennsylvania resident change a student's out-ofstate status unless
the relative legally
adopts the student. In order to qualify for Pennsylvania resident status for purposes of determining tuition, a student must meet State System of Higher Education criteria, as summarized below:

- Continuous residence in Pennsylvania for a period of 12 months prior to registration as a student at an institution of higher education in Pennsylvania.
- U.S. citizenship or formal declaration of intent to become a citizen or admission to the United States on an immigrant visa. A tourist or student visa, that is a nonimmigrant visa, is not proof of intent of residence.
- Pennsylvania residency by the parents or guardians of students who are minors. The age of majority in Pennsylvania for establishing an independent residence for tuition purposes is 22; however, a minor may prove financial emancipation and independence
through clear and convincing evidence.

United States government employees or members of the United States armed forces who were residing in Pennsylvania immediately prior to entering government service and who have continuously maintained Pennsylvania as their legal residence shall be presumed to be a Pennsylvania resident. Others in military service stationed in Pennsylvania shall be deemed Pennsylvania residents.

Students receiving a scholarship or grant dependent on place of residence from a state other than Pennsylvania will not be considered a Pennsylvania resident.

Students who change their residence from Pennsylvania to another state are required to give prompt written notice to the university. The university may reclassify students in the event it believes they are no

Pennsylvania
resident.

Students may
challenge their residency
classification by filing a form
"Residency
Classification Data
Collection Form"
available in the
Office of Student
Accounts in Room 103, Old Main.

## Financia

1 Aid
Timeline

- A


## General <br> Guide of <br> What to <br> Do and <br> When

ITEMS TO
COMPLETE
(CURRENT AID
RECIPENTS)

Receive a
Renewal FAFSA
in the mail from
federal processor

Gather financial aid documentation
necessary for completion of the FAFSA

Dec Jan Feb Mar Apr Dec Jan Feb Mar Apr

Dec

## (new aid applicants)

Obtain a Free
Applications for Federal Student
Aid (FAFSA) or
file on-line at
www.fafsa.ed.gov

Mail your FAFSA to the Federal
Processor. THE
EARLIER THE
BETTER! (keep a
copy for your records)

Review your
Feb Mar Apr
Student Aid
Report (SAR) for
errors and make
necessary
corrections

Provide the
Financial Aid Office with all
requested
information

MAY 1 - FAFSA
deadline for
PHEAA State
Grant (FAFSA
must be received by processor by this date)

File Stafford Loan
Master
Promissory Note
with lender (new
Stafford
borrowers)

Receive
determination of PHEAA Grant
eligibility

Receive billing
statement from

## Undergr <br> ad <br> Admissio

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Students are admitted to Slippery Rock University of Pennsylvania for the fall semester, spring semester, or a summer term. The university calendar should be consulted for specific starting dates. Applicants are considered for admission on a rolling basis. Criteria and deadlines used to determine admission to the university are defined by an applicant's admission category.<br>Admission to the university may be subject to space availability and criteria used for admission to the university are subject to change.

Click on a link to be taken to the entry below.

- Freshmen - What is Academic

Applicants Passport?

| - | - Post Baccalaureate |
| :--- | :--- |
| Admission | Students |
| Guidelines |  |
| for New | - Special Student |
| Freshmen | Admission |
|  |  |
| - How to | - Transient Students |
| Apply for |  |
| Admission | - Visiting Students |
| as a New |  |
| Freshman | - Faxed |
|  | Transcripts/Documents |
| - Freshmen |  |
| Residence | - Student Right-to- |
| Requirement | Know and the Clery |
|  | Act |
| - Transfer |  |
| Students | - International |
| - How Are |  |
| Transfer |  |
| Credits |  |
| Evaluated? |  |

## Freshmen Applicaı

Any high school graduate (or anyone who will be a high school graduate prior to attendance) or anyone who has passed the General Educational Development test (GED) who has not yet enrolled at a college, university, or other post secondary educational institution and intends to enroll at Slippery Rock University to pursue a degree granting program shall apply for admission as a new freshman. Students who enroll in dualenrollment college credit programs prior to high school

# Admissio 

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New

## Freshme

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New freshmen are
admitted to
Slippery Rock
University on a
rolling basis for all
terms. Admission
criteria used to
evaluate an
applicant usually
include the
student's previous
academic record
and standardized
test scores.
Admission
guidelines are
based upon the
academic profiles
of previously
successful students.
First-time, full-time
students (new
freshmen) who
succeed most often
at Slippery Rock
possess a
cumulative grade
point average of 3.0
on a 4.0 scale in
high school as well
as SAT or ACT
scores that are
above average at
the time of
admission. Other
students who apply may be asked to supply additional information and may be considered for admission on an individual basis using a Waitlist process. Additional admission criteria for applicants on the Waitlist may include: high school course rigor, grade trends, grades in core college preparatory courses, class rank, service and leadership, special talent, essay quality and letters of recommendation. Waitlisted applicants are offered admission on a rolling, space available basis and applicants closest to the academic and standardized test admission guidelines are offered admission most frequently.

Slippery Rock
University
recommends that entering freshmen complete a college preparatory curriculum in high school consisting of four years of English; four years of social studies; three years of science with two years laboratory science; three years of mathematics with a fourth year recommended,
including algebra one, algebra two and geometry; and two years of the same foreign language.

## How to <br> Apply for <br> Admissio

n as a
New
Freshma

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Applicants need to supply the following credentials to apply for admission:

- A completed

Application for
Admission
(admission applications are available through the Office of Admissions and via the web at www.sru.edu)

- A \$ 25.00
application fee (non-refundable)
- Official high
school transcripts or GED, and senior year (12 th Grade)
class schedule if enrolled in high school
Official transcripts are those that either 1) are sent directly from the school to
Slippery Rock
University's Office
of Admissions, or

2) are delivered to
Slippery Rock
University's Office
of Admissions in a
sealed envelope
from the school. No
other transcripts
will be considered
official. Transcripts
should reflect all
grades up through
the end of the
junior year (six
completed
semesters). Final
official high school
transcripts
documenting
graduation from
high school will be
required upon
graduation prior to
the start of the
initial semester of
enrollment. Failure
to document high
school graduation
will result in the
revocation of
admission.
Slippery Rock
University
recommends that
official transcripts
include a student's
complete curricular
and grading
history, semester
and cumulative
grade/quality point
averages (both
weighted and un-
weighted if
weighting is
practiced), and
class rank if
calculated. If the
high school uses a
percentage grading
scale, any
conversion guide to
a 4.0 scale is also recommended.
Home schooled students should supply transcripts of home school curriculum as well as any previous high school transcripts if applicable.

If an applicant is submitting a GED rather than a high school diploma, the GED
documentation must be a copy of the diploma and include the official test results.

Slippery Rock University accepts either the SAT or ACT for the purposes of an admission decision.
SAT or ACT scores are required for admission consideration for current high school students, home schooled students, or students who graduated from high school less than 2 years ago. Adult students who graduated from high school more than two years ago are not required to submit standardized test scores. Official SAT or ACT scores are results that arrive at the Slippery Rock University Office
of Admissions either 1) electronically directly from the testing agency, 2) directly from the high school records office, or 3) delivered on hard copy to the Slippery Rock University Office of Admissions directly from the testing agency.

Credentials should be directed to the Office of Admissions at Slippery Rock University. Once all credentials are received, Slippery
Rock University
admits new freshmen on a rolling basis for all terms. Applicants will either be offered admission or placed on a Waitlist. Once capacity is reached, the admission of new freshmen students is restricted, and any Waitlist applications not acted upon will be denied admission. The date that new freshmen student admission is restricted is subject to change.
Applicants who are offered admission must reply to Slippery Rock to accept their offers of admission, along with remitting an
orientation deposit, before they are considered admitted.
Admission offers not acted upon are subject to rescission once enrollment capacity is reached. New freshmen students seeking admission for the fall semester are encouraged to apply beginning the preceding August and not later than the preceding April.

Freshman admission is valid for the term it is offered, or any subsequent term for not later than one academic year, defined as starting in summer and ending with the spring semester. Students wishing to defer admission should contact the Office of Admissions.

## Freshme

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## Residenc

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## Require ment

All new freshmen are required to live on campus.
Freshmen students
living with their
parents or legal
guardian within a
reasonable
commuting
distance may
request a release
from this
requirement in order to commute from home. The Residence Life
Housing Appeals
Board will review
all written requests
for this exception.

## Transfer Students

Transfer students are students who have graduated from high school and have subsequently enrolled in coursework at another college, university, or other type of postsecondary institution without completing a baccalaureate degree and intend to enroll at Slippery Rock University to pursue a degreegranting program. High School students who complete postsecondary coursework prior to their high school graduation are considered new freshmen. Transfer students must be in good standing and eligible to return to the last institution attended in order to receive an offer
admission to Slippery Rock University.
Transfer applicants who receive offers of admission generally possess a cumulative grade point average of 2.0 or greater on a 4.0 scale from all institutions attended. Students who were suspended or dismissed from Slippery Rock University and subsequently attend another institution do not apply for transfer admission. These students should consult the appropriate college dean's office.

Students who plan to transfer to Slippery Rock University must apply for admission to the university by submitting the following credentials to the Office of Admission:

- A completed

Application for Admission (admission applications are available through the Office of Admission and via the web at www.sru.edu )

- Official transcripts from each postsecondary institution attended.
- Official high school transcripts are required if the student will not hold an associate degree at the time of enrollment at the university or has not completed 60 semester hours of enrollment at the time of application. Students who hold a GED and not a high school diploma, should submit:
- Official High

School transcript, that delineates completed coursework, and - Official copy of the GED test scores.
A qualified student who is enrolled at another institution at the time of application to Slippery Rock University may be granted conditional admission until all current coursework is successfully
completed and final official transcripts are submitted to the Office of
Admissions.

## How Are <br> Transfer <br> Credits <br> Evaluate

An unofficial
evaluation of credits earned at post-secondary institution is provided upon request. An official evaluation is provided when a student accepts the offer of admission. Courses, in which grades of C- and higher are earned, are accepted in transfer provided the student meets all regular admission requirements. Students who qualify for the Academic Passport program may be allowed to transfer credits for which a D grade has been earned (see Academic Passport).

To qualify for graduation a student must fulfill all Slippery Rock University academic requirements and complete the last 30 credits in residence at the university. To be considered for graduation with honors, students must earn a minimum of 60 credits at Slippery Rock University (see Honors at Graduation).

## What is Academic

The Academic
Passport is a
transfer program
designed to
facilitate the transfer of students from Pennsylvania community colleges to State System of Higher Education universities, and to support the transfer of undergraduate credits earned by students at other State System of Higher Education universities.
Students who meet the established criteria will be granted an Academic Passport that guarantees admission to the university and the fullest consideration of transfer credits.

## Academic Passport Criteria and Privileges

Students transferring with an Associate Degree

- Students who
have earned a
Pennsylvania community college
Associate in Arts
(AA), or an
Associate in
Science (AS)
degree, which has a liberal arts component of a minimum of 30 credits, will be granted an Academic Passport
and will be
guaranteed admission to the university if the student has earned a minimum QPA of 2.000 from all institutions attended. The student must apply for admission in accordance with the established university policy on admission.
- Guaranteed admission to the university through Academic Passport does not necessarily guarantee admission to specific academic programs. Some academic majors may require higher admission standards than the Academic Passport requirement.
- For those students holding the appropriate associate degree, the letter grades of " D " or above are acceptable to the university. Some academic majors may require that the letter grade of "C" or above be earned for specific course-work.
- Students must meet all of the established program admission standards required of all Slippery Rock University students.
- In the acceptance and application of transfer credits for students holding an Academic Passport, the university will strive to apply all credits (to a maximum of 67 of the credit hours for the baccalaureate degree) earned at the community
college level toward the completion of the baccalaureate degree. Up to a maximum of 45 credits earned at the sending institution shall be used to meet liberal studies. In certain circumstances, such as a change in major or intended program of study, it may not be possible to apply all credits earned at the community college. Students
Transferring From
Other State System
of Higher
Education
Universities
- Students transferring from other State System of Higher Education universities who have attained a 2.000 QPA or higher in a minimum of 12 credit hours of college level course-work and hold a minimum 2.000 QPA from all
institutions
attended hold an Academic Passport
and are guaranteed admission to the university.
- Guaranteed admission to the university through Academic Passport does not necessarily guarantee admission to specific academic programs. Some academic majors may require higher admission
standards than the Academic Passport requirement.
- For those students holding the Academic Passport, the letter grades of "D" or above are acceptable to the university. Some academic majors may require that the letter grade of "C" or above be earned for specific course-work.
- Academic Passport students must meet all of the established program admission standards required of indigenous students.
- In the acceptance and application of transfer credits for students holding an Academic Passport, the university will strive to apply all credits to the completion of the baccalaureate
degree. In certain circumstances, such
as a change in
major or intended program of study, it may not be possible to apply all credits earned.
Transfer students are reminded that only the credits, not the grades, earned at other colleges/universitie s are accepted in transfer by Slippery Rock University. Transferred credits do not affect a student's Slippery Rock University Quality Point Average, which is based only on credits completed at Slippery Rock University.

Transfer students must list all institutions previously attended on their application for admission and submit official transcripts from all previously attended post-secondary institutions regardless of the dates/time in attendance. Failure to do so may lead to withdrawal of admission status and/or dismissal from the university. In addition, students failing to list coursework from other colleges will not be permitted to petition for the
acceptance of these transfer credits after they have been admitted or readmitted to the university.

Due to the logistics of obtaining transcripts from other educational institutions, and the time required to evaluate previous course work, prospective transfer students are strongly encouraged to apply for admission and request the required credentials as soon as possible, and not later than one month prior to the first day of classes for the term they wish to begin enrollment.

## Post

## Baccalau

## reate

## Students

Students who have
earned a
baccalaureate or
higher degree from
an approved
institution may
qualify for
admission to earn
additional
undergraduate credit beyond their degree (see same title in College of Education).

Students interested in postbaccalaureate study may take course work for selfenrichment or may earn a second degree or academic certificate. Students pursuing an additional degree must earn a minimum of 30 credits at SRU beyond their first baccalaureate degree and meet all department requirements for the degree in that department.

Post-baccalaureate students may not enroll at SRU to add a second major, minor, or other academic credentials to their undergraduate degree without meeting all requirements for a second degree.

Students interested in pursuing postbaccalaureate admission should contact the university's Office of Undergraduate
Admission at 1-
800-929-4778.

| Admission |
| :--- |
| Guidelines for |
| Post |
| Baccalaureate |
| students seeking a |
| second degree or |
| teacher |
| certification |

A baccalaureate degree awarded from a regionally accredited institution of higher education is required. Certain programs, such as teacher certification and nursing programs, require applicants to meet additional or more stringent admission criteria, including minimum Quality<br>Point Average requirements. Interested applicants should contact those college or department offices for admission guideline information prior to applying for admission. Post Baccalaureate students seeking to earn a second degree and/or teacher certification may be eligible for financial aid, and should contact the Financial Aid Office for further information.<br>How to apply for admission as a Post<br>Baccalaureate<br>student seeking a second degree or teacher certification<br>Applicants need to supply the following credentials to apply for admission:

- A completed

Post Baccalaureate Application for Admission

- A \$ 25.00
application fee (non-refundable)
- Official transcripts from all colleges, universities, or other postsecondary educational institutions attended.
- Other program specific documentation may be required. Contact the Office of Admissions or see the Post
Baccalaureate Application for Admission for further information. These credentials should be sent to the Slippery Rock University Office of Admissions. The application process for teacher certification and nursing programs may require additional application credentials. Generally, for non-selective/nonteacher certification degree programs, most students who successfully graduate from a college or university are offered admission.

Due to the logistics of obtaining transcripts from
other educational institutions, and the time required to evaluate previous course work, prospective post baccalaureate students seeking a second degree or teacher certification are strongly encouraged to apply for admission and request the required credentials as soon as possible, and not later than one month prior to the first day of classes for the term they wish to begin enrollment.

Admission Guidelines for Post
Baccalaureate students seeking to enroll for enrichment

Individuals who hold a
baccalaureate degree from an accredited college or university may seek to enroll in a course, or courses, for personal enrichment, preparation for graduate study or examination, or ACT 48 credit. Slippery Rock University welcomes these students on a space available basis.

How to apply for admission as a Post Baccalaureate

## student seeking to enroll for enrichment

Applicants need to supply the following credentials to apply for admission:

- A completed

Post Baccalaureate
Application for
Admission

- Official
transcripts from the accredited college, university, or other post-secondary educational institution that awarded the baccalaureate degree. Other transcripts are not required for admission but may be necessary to support individual course prerequisites.
- Current teachers are required to submit a copy of a valid teaching certificate in place of transcripts when applying for ACT 48 credit.
- Applicants
should see the Post
Baccalaureate
Application for
Admission for
information
regarding the \$
25.00 application
fee (non-
refundable)


## Special Student

## Admissio

## n

A special student is a student who does not possess a baccalaureate degree and wishes to enroll for undergraduate level credit coursework at Slippery Rock University for enrichment who does not intend to use the course work toward a degree program at an institution of higher education. Special student non-degree admission is valid for one semester at a time. Students who wish to enroll as special students may reapply for admission for subsequent terms until a maximum of 30 semester hours have been completed, at which time further enrollment is precluded in the special student nondegree status.
Special students are not eligible for financial aid.

## Admission Guidelines for Special Student Admission

A special student must be high school graduate or have a GED to enroll. Special
student applicants sign a statement on the application for admission to that extent and have one semester of attendance to supply proof of high school graduation (generally either a high school transcript or GED). The Slippery Rock University Fast Track Program also offers admission as special students to qualified high school students seeking to enroll at the University prior to high school graduation. Students interested in the Fast Track program should contact the Office of Admissions directly for more information, and to schedule a meeting to discuss the Fast Track application process.

How to apply for Admission as a Non-Degree Student

Applicants need to supply the following credentials to apply for admission:

- A completed

Special Student (non-degree) Application for Admission

- Special student applicants pay no application fee
- Official high
school transcripts with a graduation date posted (or GED) are required during the term of enrollment. Other credentials may be appropriate for special Slippery Rock University programs. Other transcripts may be required to meet specific course prerequisites. Special students must enroll and make payment by registration and fee payment deadlines as published in the Class Schedule for the term in which they wish to enroll.


## Transien

## t

## Students

Any current undergraduate student from another regionally accredited institution of higher education who wishes to enroll for one semester at Slippery Rock University for credit course work while pursuing a degree program at their home college or university may apply for admission as a transient
student. Transient students enroll for one semester at Slippery Rock with the intent of returning to their home institution to pursue their degree.

How to apply for Admission as a Transient Student

Applicants need to supply the following criteria to apply for admission:

- A completed

Non-Degree
Application for Admission with transient status requested or summer school transient application

- Generally no other documentation is required, although transient students are strongly encouraged to review their transient attendance and course selection with their academic advisor at their home school.
Other transcripts may be required to meet specific course prerequisites. Contact the Office of Academic Records and Summer School for this information. Transient students must enroll and make payment by
registration and fee payment deadlines as published in the Class Schedule for the term in which they wish to enroll.

Transient students are admitted through the Office of Admissions for fall and spring semester, and admitted through the Office of Academic Records and Summer
School for summer semester.

## Visiting Students

Any current
undergraduate
student from one of
the other 13
member
universities of the
State System of
Higher Education
in Pennsylvania
that wishes to
enroll for one
semester at
Slippery Rock
University for
credit course work
while pursuing a
degree program at
their home college
or university may
apply for admission
as a visiting student
rather than a
transient student.
Visiting students
enroll for one
semester at
Slippery Rock
University with the
intent of returning
to their home
institution to pursue
their degree.
Eligible students should contact the academic records office at their home institution to review visiting student grading policies prior to enrolling as a visiting student at Slippery Rock.

How to apply for Admission as a Visiting Student

Applicants need to supply the following credentials to apply
for admission:

- A completed

Visiting Student
Application for
Admission
Visiting students must enroll and make payment by registration and fee payment deadlines as published in the Class Schedule for the term in which they wish to enroll.

Visiting students are admitted through the Office of Admission; however, application forms are to be routed through the Office of Academic Records and Summer School.

Faxed

## pts/Docu ments

Transcripts and documents faxed to Slippery Rock University on behalf of students may be accepted unofficially for the purpose of making a temporary admission decision. No final decision will be made pertaining to acceptance to the university or acceptance of transfer credit until the university receives the official documents.

Note: All credentials submitted to Slippery Rock University become the property of Slippery Rock University and will not be returned to the student or forwarded to third parties.

## Student <br> Right-to-

Know
and the
Clery
Act

Notification of
Availability of

Student Consumer
Information (Clery
Act) including:

- Annual Security

Report

- Freshman and scholarship athlete
graduation rates
- Students' Rights
of Privacy
(FERPA)
- Other
information of importance to students Slippery Rock University's Annual
Security Report includes statistics for the previous three years concerning reported crimes that occurred on campus, in certain off-campus buildings or property owned or controlled by Slippery Rock University; and on public property within, or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and drug use, crime prevention, the reporting of crimes, sexual assault, and other matters.

You can obtain a copy of the Annual Security Report at the following
website:
www.sru.edu.page
$\mathrm{s} / \mathbf{1 4 0 6}$.asp or by
contacting the
Office of
University Police at
724-738-3333.

You may access the University's
Student
Consumer
Website at www.sru.edu/page s/1257.asp or by contacting the
Office of Academic
Records and
Summer School at
724-738-2010.

## Internati

## onal

## Students

Slippery Rock
University actively
seeks international
students to provide
diversity to its
student population.
Diversity expands
the cultural
awareness of
students and others.
The number of
students admitted
from individual
countries may be
limited to ensure a
balanced
representation of
cultures. To be
considered for
admission, the
following
credentials must be
submitted to the
Office of
International
Services:

- Completed application for admission for international students.
- Official certified true copies in English of all secondary and postsecondary school transcripts that show year-by-year listing of courses, grades earned for each course, and credits earned for each course.
- Official certified true copies in English of all secondary and postsecondary school certificates,
diplomas, degrees, and examination results.
- Proof of English
language
proficiency. This
usually is
determined by a
score of 500 (paper
test) or 173
(computer based
test) or better on the Test of English as a Foreign
Language (TOEFL) or by proficiency at the 112 level or better from one of the ELS (English Language Schools) language centers in the United States.
- Verification of applicant's ability to meet educational costs. Financial status is not used to determine academic qualification for admission to the
university but must be verified to satisfy the U.S. Immigration and Naturalization Service requirements. The deadline for submission of all application and supporting credentials is May 1 for fall admission and October 1 for spring admission. New international students are not admitted for summer terms. All applicants are considered automatically for financial aid.

For an application packet or further information, please contact the Office of International Services or e-mail kelly.slogar@sru.e du

## The <br> Universit

 yClick on a link to be taken to the entry below.

- The University
- Vision
- Mission
- 

Accreditation

- Location
- Students


## The University

Slippery Rock University of Pennsylvania, one of 14 state-owned institutions that comprise the State System of Higher Education of the Commonwealth of Pennsylvania, has a long tradition of providing quality education to students. Started in 1889 as a teacher education institution, the university developed into a multi-purpose institution with approximately 8,000 students and with over 60 degree programs in the College of Business, Information, and Social Sciences, College of Education, College of Health, Environment and Science, College of Humanities, Fine and Performing Arts, and Graduate Studies.

## Vision

Slippery Rock
University will
excel as a caring
community of
lifelong learners connecting with the world.

## Mission

The fundamental mission of Slippery
Rock University is
to provide high quality
undergraduate and graduate academic instruction. Complementary missions are to conduct scholarly
research, to
promote
professional
performance, and
to address the
educationally
related economic, health,
environmental,
social, cultural, and
recreational needs
of the region served
by the university.
To accomplish these missions, Slippery Rock University primarily focuses its efforts in the academic areas of:
the arts and
sciences,
teacher
education,
environme
ntal
sciences
and
studies,
health and
human
services,
computer,
informatio
n sciences,
business

The perspectives of Slippery Rock University are contemporary and futuristic, national and international.
The university provides experiences and opportunities for students to demonstrate leadership and to develop confidence and self-reliance; it promotes their intellectual, social, and physical development; and it accomplishes these in an open, caring, nurturing, and friendly environment. Slippery Rock University is committed to serving and empowering all segments of the population that can benefit from its offerings.

The individual and collective excellence for which Slippery Rock University stands will continue to be measured by the quality of its graduates and their successes in serving society.

## Accreditation

Slippery Rock
University is
accredited by the following accrediting agencies:

## Commission on

 Higher Education Middle States Association of Colleges and Schools 3624 Market Street Philadelphia, PA 19104-2680 www.msche.org
## Accreditation

Association for Ambulatory Health Care, Inc. 3201 Old Glenview Road, Suite 300 Wilmette, IL 60091 www.aaahc.org

Accreditation
Board for
Engineering and
Technology, Inc.
11 Market Place,
Suite 1050
Baltimore, MD 21202
www.abet.org
American Physical Therapy
Association
1111 N. Fairfax Alexandria, VA
22314-1488
www.apta.org
American Society
of Exercise
Physiologists
Department of
Exercise
Physiology
The College of St.
Scholastica
1200 Kenwood
Avenue
Duluth, MN 55811
www.asep.org

Association of Collegiate Business Schools<br>7007 College<br>Blvd., Suite 420<br>Overland Park, KS<br>66211<br>www.acbsp.org

Commission of Accreditation of Allied Health
Education

## Programs

35 E. Wacker Dr.,
Suite 1970
Chicago, IL 60601-
2208
www.caahep.org
Council for
Accreditation of
Counseling and
Related
Educational Programs
5999 Stevenson
Avenue
Alexandria, VA
22304
www.cacrep.org
Council on Social
Work Education
1600 Duke St.,
Suite 300
Alexandria, VA
22314
www.cswe.org

## National

Association of
Schools of Dance
11250 Roger Bacon
\#21
Reston, VA 20190
nasd.art-
accredit.org
National
Association of
Music Therapy
50511 th St., S.E.
Washington, D.C.
20003

National
Association of
Schools of Music
11250 Roger Bacon \#5
Reston, VA 20190

National Council for the Accreditation of Teacher Education 2010
Massachusetts
Ave., N.W.
Washington, D.C.
20036-1023
www.ncate.org
National League for Nursing, Inc. 350 Hudson St. New York, NY 10014
www.nln.org/nlnjo urnal

National
Recreation and Park Association
22377 Belmont
Ridge Road
Ashburn, Virginia
20148
www.nrpa.org

## Location

Students and visitors to the SRU campus discover that the university is located in a small town of about 3500 permanent residents. The university is also in the middle of a population center of about 120,000 people. Two major interstate highways,

I-79 and I-80,
intersect seven miles from the university and make the university easily accessible to Pittsburgh and Erie, PA, and to Youngstown, Ohio. Students can travel fifty minutes south on I-79 to Pittsburgh and enjoy its major cultural venues that include opera, symphony, theatre, and museums and its major league baseball, football, and hockey teams. The city of Erie, Presque Isle, and Lake Erie are an easy ninety minutes north on I-79, and thirty-five miles west on I-80 is Youngstown, Ohio.
Most students
enjoy instructional
experiences on-
campus. In
addition, students
use learning
facilities at nearby
Moraine State Park,
Jennings
Environmental
Education Center,
McKeever
Environmental
Learning Center,
Regional Learning
Alliance at
Cranberry Woods
as well as the
Wallops Island
Marine Science
Laboratory in
Virginia. Many
academic
departments
sponsor internship
programs that provide on-the-job educational and professional training.
Opportunities to study abroad in international settings are available to students.

## Students

Approximately 70 percent of Slippery
Rock University's
8,000 students are
from western
Pennsylvania, with
Pittsburgh and other cities in
Allegheny County
providing the largest number of students. Another 22 percent of the student body comes from central and eastern
Pennsylvania. The remaining 8 percent comes from more than 40 states in the United States and over 70 other countries.

## Faculty

The 405 faculty members at Slippery Rock University are teachers, scholars, and contributors to the university and community. The typical faculty member teaches four courses each semester, engages in scholarly
research and
creative endeavors, and participates in a variety of decision-making processes. Of the current faculty members, fiftythree percent are male and fortyseven percent are female. Eleven percent are members of ethnic groups. In addition, eighty-five percent are tenured or occupy tenure-track positions, and ninety-eight percent hold advanced degrees with seventy-five percent holding doctorates, MFA's, or law degrees. <>

## Campus

Slippery Rock
University's
gorgeous 600-acre campus is located in the rolling countryside of Western Pennsylvania. Thirty-one major buildings that blend traditional and modern architecture comprise the core of the campus for an optimum living and learning environment.

Among public and private universities in Pennsylvania, Bailey Library ranks as one of the best public or
private university libraries in Pennsylvania. The library online system allows easy searching of the library's print collections, as well as many other resources including NetLibrary electronic books, over 12,000 online full-text journals, and the resources of many other Pennsylvania libraries. Swope Music Hall is designed as both a performing and a learning center. Vincent Science Hall has laboratories, classrooms, and a greenhouse.
Morrow Field
House is an instructional and recreational facility that houses a gymnasium, swimming pool, handball court, dance studio, tennis court, and track.
McKay Education,
Spotts World
Cultures, and
Eisenberg
Classroom
Building are
examples of
standard
classrooms that
have small and
large classrooms,
auditoriums, and
other specialized
classrooms. The
Physical Therapy
building is a state-
of-the-art building
where the Graduate School of Physical
Therapy program is located.
International
studies and
initiatives reside in
the recently
renovated Carruth
Rizza Hall.
Students reside in eight on-campus residence halls that are located conveniently to most of the other campus buildings, and upper class students can reside at the ROCK apartment complex. Privately owned residence halls, apartments, and other types of living accommodations are available offcampus. Students take their meals at Weisenfluh and Boozel dining halls.

## Recreation Opport

The Robert N .
Aebersold
Recreation Center, an 83,000 square
foot facility, offers
a myriad of
physical fitness
areas. These range
from aerobic
workout areas to a
40-foot climbing
wall. The "ARC,"
built following a
student initiative
with student
funding, is open
year-round and
includes the Russell
Wright Fitness
Center. A 200-
meter, indoor
running track is part of the complex as is a 3,428 square foot indoor pool. A sun deck is adjacent to the pool. One gymnasium area offers four, woodfloor courts for basketball, volleyball, badminton, and other physical activities, and a second gymnasium area offers space for aerobics, floor hockey, deck hockey, and soccer. The University Union is another campus hub with a bookstore, cafe, grille, recreation areas, and meeting rooms. Several tennis courts, a 10,000-seat football stadium, a 1,500-
seat baseball stadium, four major athletic fields, and nine auxiliary fields provide other recreation opportunities to augment the ARC and the Union.

## Grants and Sponso

Research and scholarship are central features of any academic environment. At

A Symposium for
annually to
highlight the research and scholarly endeavors of faculty, staff and students. The twoday, campus-wide event encompasses poster sessions, oral presentations and performances that showcase the work of projects conducted throughout the academic year.


[^0]:    The Government Contracting Assistance Center (GCAC), a unique segment of the College of Business, Information, and Social Sciences, was established for the purpose of aiding local businesses and industries to compete successfully for federal, state and local government contracts and subcontracts.

[^1]:    - SASW Electives - Credits:

    6

    - Free Electives - Credits: 413
    or SASW 450 (optional) 3-12
    - SASW 401 - Applied

    Anthropology Credits: 3

