

# Introduction

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## Mission of the University

Shippensburg University of Pennsylvania is a regional state supported institution. It is part of the State System of Higher Education of Pennsylvania, which is made up of fourteen universities located in various geographic regions throughout the Commonwealth. Founded in 1871, Shippensburg University serves the educational, social, and cultural needs of students primarily from south-central Pennsylvania. The university enrolls students from throughout the Commonwealth of Pennsylvania, the Mid-Atlantic region, the United States, and various foreign countries as well.

Shippensburg is a comprehensive university offering bachelor's and master's degree programs in the Colleges of Arts and Sciences, Business, and Education and Human Services. The curricula are organized to enable students both to develop their intellectual abilities and to obtain professional training in a variety of fields. The foundation of the undergraduate curriculum is a required core of courses in the arts and sciences. These courses prepare students to think logically, read critically, write clearly, and verbalize ideas in a succinct and articulate manner; they also broaden students' knowledge of the world, past and present.

The university's primary commitment is to student learning and personal development through effective and innovative teaching and a wide variety of high-quality, out-of-class experiences. The ultimate goal is to have students develop to their utmost the intellectual, personal, and social capabilities they need to perform as competent citizens prepared to embark on a career immediately upon graduation or after advanced study. The personal attention given each student at Shippensburg is reflective of the strong sense of community that exists on campus and the centrality of students within it. The university encourages and supports activities that give students many opportunities to apply the theories and methods learned in the classroom to real or practical situations, such as faculty-student research and student internships. Student life programs and activities complement the academic mission and further assist students in their personal, social, and ethical development.

Committed to public service and community-centered in its relationships to the region, the university works closely and collaboratively with other organizations at institutional, programmatic, and individual levels to develop common goals, share resources, and invest cooperatively in the future of the region.

## Brief History

Shippensburg University was established in 1871 as the Cumberland Valley State Normal School. The school received official approval by the state on February 21, 1873, and admitted its first class of 217 students on April 15, 1873. In 1917 the school was purchased by the Commonwealth of Pennsylvania.

On June 4, 1926, the school was authorized to grant the bachelor of science in education degree in elementary and junior high education. The school received a charter on October 12, 1926, making it the first normal school in Pennsylvania to become a state teachers college. On June 3, 1927, the State Council of Education authorized the name change to the State Teachers College at Shippensburg.

The business education curriculum was approved on December 3, 1937. On December 8, 1939, Shippensburg State Teachers College became the first teachers college in Pennsylvania and the fourth in the United States to be accredited

by the Middle States Association of Colleges and Secondary Schools (now Middle States Commission on Higher Education).

The State Council of Education approved graduate work leading to the master of education degree on January 7, 1959. On January 8, 1960, the name change to Shippensburg State College was authorized.

The arts and sciences curriculum was authorized by the State Council of Education on April 18, 1962, and the bachelor of science in business administration degree program was initiated on September 1, 1967.

On November 12, 1982, the governor of the Commonwealth signed Senate Bill 506 establishing the State System of Higher Education. Shippensburg State College was designated Shippensburg University of Pennsylvania effective July 1, 1983.

## Accreditation

Shippensburg University is accredited by the Middle States Commission on Higher Education; AACSB International—the Association to Advance Collegiate Schools of Business; ABET, Inc. (Computer Science); Academy of Criminal Justice Sciences; Accrediting Council on Education in Journalism and Mass Communication (ACEJMC); the American Chemical Society (ACS); the Council on Social Work Education (CSWE); the Council for Accreditation of Counseling and Related Educational Programs (CACREP); the International Association of Counseling Services (IACS); the Council for Exceptional Children (CEC); and the National Council for Accreditation of Teachers (NCATE).

## The Campus

Shippensburg University is located in the Cumberland Valley of south-central Pennsylvania, overlooking the Blue Ridge Mountains. The campus itself is situated on 200 acres of rolling land and is surrounded by a vast array of cultural and recreational sites.

## Travel Time

The interstate highway system puts Shippensburg within reasonable travel time of numerous East Coast cities:

Harrisburg	45 minutes
Gettysburg	30 minutes
Baltimore	2 hours
Washington D.C.	2 hours
Philadelphia	2.5 hours
Pittsburgh	2.5 hours
New York City	4 hours

## Directions

If your point of departure is ...

*East of Shippensburg:* Use Pennsylvania Turnpike Exit 226 (Carlisle) to I-81 south. Take I-81 to Exit 29.

*West of Shippensburg:* Use Pennsylvania Turnpike Exit 201 (Blue Mountain) to Route 696 south.

*North of Shippensburg:* Take I-81 south to Exit 29.

*South of Shippensburg:* Take I-81 north to Exit 24.

## Academic Programs

Shippensburg University offers a variety of undergraduate programs in three colleges: the College of Arts and Sciences, the John L. Grove College of Business, and the College of Education and Human Services.

The following table shows the number of students earning degrees and the average number of years taken to finish. These figures include students who entered as first-time freshmen from 2006 to 2008.

<b>Program*</b>	<b>No.</b>	<b>Avg. Years</b>
<i>College of Arts and Sciences</i>		
Art	68	4.42
Biology	135	4.29
Chemistry	15	4.14
Communication/Journalism	168	4.31
Computer Science and Engineering	44	4.50
Economics	18	4.67
English	90	4.31
Geography/Earth Science	111	4.53
History	118	4.39
Human Communication Studies	61	4.58
Interdisciplinary Arts	18	4.63
Mathematics	50	4.36
Modern Languages	20	4.23
Physics	30	4.57

Political Science	61	4.47
Psychology	208	4.31
Sociology	56	4.65
<i>John L. Grove College of Business</i>		
Accounting/Management Information Systems	178	4.22
Finance	159	4.27
Management/Marketing	397	4.32
<i>College of Education and Human Services</i>		
Criminal Justice	198	4.33
Exercise Science	70	4.45
Social Work	92	4.31
Teacher Education	395	4.12
University Total	2760	4.32

*\*Four-year programs only, suppressing departments with less than ten graduates*

## Statements of Compliance

The Office of Social Equity, located in Old Main 200, coordinates the university's compliance with laws and regulations relating to equal opportunity, sexual harassment, and "reasonable" accommodations for persons with disabilities. Any questions or complaints should be directed to the Executive Director of Social Equity at (717) 477-1161.

## Equal Opportunity

Shippensburg University is committed to creating an environment free of discrimination for all of its employees and students. The Office of Social Equity at Shippensburg University assists the University in ensuring equal opportunity and access to educational, employment and contract opportunities for all persons including students, faculty, staff and administrators. The University will make every effort to provide these opportunities to all persons regardless of race, color, religion, sex, national origin, disability, age, veteran status, sexual orientation or gender identity. This applies to all members of the University community, all applicants for admission or employment and all participants in

university-sponsored activities. The nondiscrimination policy sets clear expectations for an environment free of discrimination, defines discrimination and provides procedures for handling charges of discrimination.

## **Sexual Harassment**

It is the policy of Shippensburg University to prohibit discrimination on the basis of sex in any of its educational programs or activities. This policy is in accordance with Title IX of the Education Amendments of 1972.

Prohibited sex discrimination covers sexual harassment including sexual violence. Sexual harassment is conduct that is sexual in nature and is sufficiently severe, persistent, or pervasive that it adversely affects a student's ability to participate in or benefit from the university's activities or educational programs or creates a hostile or abusive educational environment. Sexual violence is a form of sexual harassment, prohibited by Title IX, which includes conduct that is criminal in nature. Acts may include rape, sexual assault, sexual battery, sexual coercion, unwanted touching, dating violence, and sexually motivated stalking.

Inquiries concerning the application of Title IX may be referred to:

Shippensburg University Title IX Coordinator  
Cecil Howard  
Office of Social Equity  
Old Main 200, (717) 477-1161, cehoward@ship.edu  
Department of Education  
<http://www2.ed.gov/about/offices/list/ocr/index.html>  
E-mail: ocr@ed.gov  
400 Maryland Ave SW  
Washington, DC 20202-1100  
Phone: (202) 245-6700  
Toll-free: (800) 421-3481  
TTY: (800) 877-8339

## **Office of Disability Services**

Shippensburg University is committed to serving all students, including those with documented disabilities. The Office of Disability Services (ODS) determines, coordinates, and provides reasonable and appropriate accommodations for eligible students who present current and comprehensive documentation. In compliance with Section 504 of the *Rehabilitation Act of 1973*, the *Americans with Disabilities Act (ADA) of 1990*, and the ADA Amendments Act of 2008, ODS coordinates services as outlined by Pennsylvania's State System of Higher Education and by Shippensburg University's equity plans. Additionally, the office works with the Human Resource Office to coordinate accommodations for campus faculty and staff with diagnosed disabilities.

Located in Suite 324 Horton Hall, the Office of Disability Services is within the School of Academic Programs and Services and is easily accessible. For further information, visit the website at [www.ship.edu/ods](http://www.ship.edu/ods), or contact the office at (717) 477-1326 or the Director at (717) 477-1329.

## **Policy for Religious Observances for Students**

Shippensburg University respects the principle of the separation of church and state, while promoting and encouraging a climate of dignity where individuals are not discriminated against or treated differently because of their religion or national origin.

To foster and advance the precepts of an inclusive environment, students desiring to participate in the religious observances of their particular faiths, creeds, or beliefs will be granted an excused absence from scheduled classes. Faculty will make appropriate accommodations for the excused absence(s), and students will be accountable for the material covered in class. Each academic semester students will be required to provide their faculty with the dates (in writing) of scheduled religious observances.

## **Access to Educational Records**

In accordance with the Family Educational Rights and Privacy Act of 1974 (commonly known as the Buckley Amendment), Shippensburg University provides its students with privacy safeguards of their educational records. The university issues reports of progress including grades, written evaluations, and letters of warning directly to the student. A student may have access to all information pertaining to his or her educational records and academic status.

Under the provisions of the Buckley Amendment, the university may release directory information about current students without violating privacy rights. Directory information includes name, address, telephone number, e-mail address, enrollment status, major, degree, and honors. Individual students may request this directory information not be released by notifying the Registrar's Office.

## **Drug-Free Campus**

Shippensburg University complies with the Drug-Free Schools and Communities Act Amendment of 1989 and has adopted a program to prevent the unlawful possession, use, or distribution of illicit drugs and alcohol by both its students and employees.

## **Campus Safety**

In accordance with Pennsylvania's College and University Security Information Act of 1988, Shippensburg University provides information relating to crime statistics and security measures to prospective students, matriculated students, and employees. The university will also comply with all campus safety provisions of the Student Right-To-Know and Campus Security Act of 1990.

## **Right-To-Know**

Shippensburg University will compile graduation and completion rates for all undergraduate students as well as for undergraduate students receiving athletically related student aid. These rates will be reported to the U.S. Secretary of Education and will be disclosed to prospective students as required by the Student Right-To-Know Act.

## **Consumerism**

Shippensburg University complies with consumer information requirements set forth in Section 493A of Title IV of the Higher Education Act of 1965 and its amendments.

## **Veterans Benefits**

Shippensburg University complies with the requirements of Title 38, U.S. Code, Veterans Benefits.

# Nonimmigrant Alien Students

Shippensburg University is authorized under federal law to enroll nonimmigrant alien students.

## Educational Diversity

As part of a public system of higher education, Shippensburg University is responsible for educating students to face the challenges of our ever-changing global society. Shippensburg University aims to create a campus culture that offers opportunities for increasing knowledge, awareness, and understanding of diversity and inclusiveness and promotes a climate that builds upon values that welcome and nurture all members of the university community. Creating an inclusive campus environment helps to prepare students to be productive public citizens in a society comprised of people with differing national, racial, religious, and cultural backgrounds.

Shippensburg University seeks to attain these goals by offering academic and co-curricular activities that address the differences that have historically divided people and have led to unjust and discriminatory practices based on race, sex, religion, national origin, and sexual lifestyle. The university also remains committed to the recruitment and retention of a broad, inclusive student body, faculty, staff, and administration who represent a diverse range of interests, talent, and cultures. By working to accomplish these goals, Shippensburg University will ensure students receive an education that prepares them for the challenges of a global society with its diverse beliefs, attitudes, and ways of thinking.

## Catalog Provisions

This catalog is intended to be a description of the policies, academic programs, degree requirements, and course offerings in effect for the 2017-2018 and 2018-2019 academic years. It should not be construed as an irrevocable contract between the student and the university. Shippensburg University reserves the right to change any of the policies, procedures, or fees described in this catalog and to apply these changes to any or all of its students as it sees fit. The university may also choose to add or delete course offerings or degree programs at any time.

## Catalog Home

## Admission Policies and Procedures

Shippensburg University is a member of the National Association for College Admission Counseling and adheres to their Statement of Principles of Good Practice: NACAC's Code of Ethics and Professional Practices.

We strive to follow these principles set forth by NACAC:

- **Education** of students, families, and others about the transition to and within postsecondary education.
- **Professionalism**, including ethical behavior and integrity of actions.
- **Collaboration** by working together to advocate for students and their best interests.
- **Fairness and Equity** by striving to eliminate bias from the education system which is viewed as a fundamental responsibility of educators.
- **Civility** by conducting dialogue with respect and openness to differences.
- **Trust** with one another and students.
- **Social Responsibility** to serve students by safeguarding their rights and their access to and within post-secondary education.

# All Applicants

The following general requirements apply to all applicants seeking admission to Shippensburg University.

## General Requirements

Students must show evidence of academic experiences that indicate their capacity to accomplish satisfactory work at Shippensburg University in their selected area of study. Criteria include graduation from an approved secondary school or equivalent preparation (as determined by the Credentials Evaluation Division of the Pennsylvania Department of Education) or successful completion of significant college-level work at another institution. The grades earned and the relationship of the course work to college preparation is of particular importance.

## Academic Potential

This is determined, in part, by scores from the SAT I: Reasoning Test of the College Entrance Examination Board or the entrance examination of the American College Testing Program (ACT). Placement tests may also be required.

## Other Criteria

Letters of recommendation, interviews, and statements of personal experiences in some cases can represent an important part of the evaluation process, particularly in those cases where the decision may be in question. These items are optional.

## New Freshman Applicants

1. Applicants should visit our website at [www.ship.edu/admissions](http://www.ship.edu/admissions) for application requirements and to apply online. You may also request general information on-line, call (717) 477-1231, or e-mail the Office of Admissions at [admiss@ship.edu](mailto:admiss@ship.edu).
2. Freshman candidates are urged to initiate the application process (which includes a \$45 application fee) as soon as possible for the fall semester. Candidates for spring semester are encouraged to submit applications by December 1. Final dates for receiving applications in the Office of Admissions for any entry period are subject to change without notice.

*\* Shippensburg University subscribes to the CEEB fee waiver program. This program provides waivers for those students for whom the fee is judged a hardship. Students should request submission of the fee waiver form through the guidance counselor.*

1. The secondary school transcript must be requested from and sent by the counselor directly to the Office of Admissions for the paper and online applications. GED results must be sent directly from the Department of Education.
2. All applicants are required to submit at least one set of scores on the SAT I: Reasoning Test of the College Entrance Examination Board or American College Test (ACT). The writing portion of the SAT will be used for placement purposes only. Those students taking the ACT are encouraged to complete the optional writing test. Arrangements should be made with the guidance counselor to take the SAT I during the junior and senior year. Applicants who graduated from high school more than two years ago are exempt from this admission requirement.
3. Shippensburg University grants advanced placement (AP) and college level examination program (CLEP) credit for general and subject area examinations based on the guidelines established by the College Board.



- The College Board administers examinations for these courses nationally each year. See [http://www.ship.edu/Admissions/\(CLEP\)\\_Credit\\_\\_\\_AP\\_Credit/](http://www.ship.edu/Admissions/(CLEP)_Credit___AP_Credit/) for more information on credits you can earn and how to register for the tests.
4. SAT II: Subject Tests are not used for the admission process. However, if submitted, these scores may be used to assist in course placement.
  5. Although the university does not require specific numbers and types of high school courses, we strongly urge students to pursue a typical college preparatory program in senior high school which should include: four years of English, three years of social sciences, three years of sequential mathematics, three years of laboratory science, and three years of one foreign language.
  6. Applications will be considered by the Office of Admissions on a rolling basis. The applicant will be notified after the application is complete.
  7. When approved for admission to the university, each student will be required to make a NON-REFUNDABLE confirmation deposit. Those students admitted to the residence halls will make an additional non-refundable room deposit. The deposits are payable to Shippensburg University and will confirm the intention of the student to become a matriculated student. The deadline for submitting the confirmation deposit is: May 1 or, if admitted after May 1, the deadline prescribed in the offer of admission letter. Extensions of the confirmation deposit date may be requested by sending a letter to the Dean of Admissions.
  8. A personal interview is not required for admission but in some situations is advisable. Please call in advance to arrange an appointment.
  9. A medical form will be forwarded to all successful applicants following receipt of the confirmation deposit. Completion of the medical form is required for enrollment.
  10. A favorable admission decision is based upon the student's qualifications at the time of the offer and is contingent upon his or her maintaining those standards through graduation from the secondary school. The student must request the final transcript (including date of graduation) be sent to the Office of Admissions. Failure to submit a final transcript will result in a hold on the applicant's file.
  11. Placement testing may be required in English, reading, mathematics, and foreign language. Notification of test dates and which exams must be completed, will be provided after admission by the Placement Testing Office.
  12. Orientation programs are held in the summer and prior to the beginning of the fall semester. An orientation program is also held at the beginning of the spring semester.

## **General Transfer Applicants**

### **Admission Procedures and Requirements**

1. Applicants may apply online at [www.ship.edu/admissions](http://www.ship.edu/admissions). Recommended time for submission of all application materials is December 1 for the Spring semester and early summer for the Fall semester.
2. Submit official transcripts of ALL college-level course work you have attempted. Official transcripts must be mailed directly from the issuing institution to the Office of Admissions. If you are currently enrolled at an institution, please be sure the transcript lists your in-progress courses and course number. Shippensburg University's Office of Admissions MAY waive the submission of high school records and SAT I scores prior to the admissions decision for students who have successfully completed 12 or more credit hours of college-level work. In addition, applicants who graduated from high school more than two years ago are exempt from submitting SAT I scores but may be required to complete placement testing (English (Writing), Math, Reading) in order to determine eligibility for admission into the University.
3. An offer of admission is based upon the student's qualifications to date and is contingent upon continuing to meet those standards for enrollment. For a transfer student, it is also required that the final transcript indicate a cumulative quality point average comparable to that which the student possessed when originally offered admission. Transfer students presently enrolled at another institution are responsible for ensuring the Office of Admissions receives a final transcript upon completion of their programs. Failure to submit a final transcript will result in a hold being placed on the applicant's file.

4. If admitted, the Dean of the appropriate college will evaluate the student's transcript to determine the amount of transferable credits. This official evaluation will be emailed to the email address provided on the application, and after the initial letter of admission.
5. When admitted to the university, each student will be required to make a NON-REFUNDABLE confirmation deposit. Those students admitted to the residence halls will make an additional non-refundable room deposit. The deposits are payable to Shippensburg University and will confirm the intention of the student to become a matriculated student.
  - The deadlines for submitting the confirmation deposit is *May 1* or, if admitted after May 1, the deadline prescribed in the offer of admission letter.
  - Extensions of the confirmation deposit date may be requested by sending a letter to the Dean of Admissions.
1. A personal interview is not required for admission but in some situations is advisable. Please write or call in advance to arrange an appointment.
2. A medical form will be forwarded to all successful applicants following receipt of the confirmation deposit. Completion of the medical form is required for enrollment.
3. All transfer students seeking a degree must plan on:
  - A minimum program of 30 semester hours to include half the credits of their major at Shippensburg. (See Graduation Requirements and Majors.)
  - All course selections subject to prior approval by the appropriate academic dean.
1. Admitted transfer students who have not completed the appropriate courses in English, mathematics, or foreign language will be required to take placement tests prior to enrollment. Notification of test dates will be provided subsequent to transcript evaluation.
2. Orientation programs are held in the summer, prior to the beginning of the fall semester, and at the beginning of the spring semester.

*\*If you are attending a Pennsylvania State System of Higher Education university, Commonwealth of Pennsylvania community college, Lackawanna College, Hagerstown Community College, Carroll Community College, Howard Community College, Frederick Community College, Raritan Valley Community College, Middlesex Community College, or Allegany College of Maryland please refer to the Pennsylvania State System Student Transfer Policy section for **important** additional information.*

## Transfer from Accredited Colleges

A minimum program of at least 30 semester hours must be taken at Shippensburg University. A transfer student who has completed an associate's degree in an academic program parallel to one at Shippensburg University will normally complete a baccalaureate program in two additional years; however, more than two additional years may be necessary to complete degree requirements in certain programs. The official evaluation will be provided following the offer of admission to the university.

## Transfer from Non-Accredited Institutions

Transfer applicants from non-accredited institutions are normally evaluated on the same basis as a freshman applicant. Work from non-accredited institutions may be considered as a part of the evaluation to determine the ability of a student to perform successfully at Shippensburg University. Official transcripts of all post-secondary work must be submitted as a part of the application process. The transcript of an applicant from a non-accredited institution, however, will not be evaluated officially by the college dean until the student has completed one semester successfully (12 college level credits) at Shippensburg and has attained a cumulative quality point average of at least 2.0. Possible transfer of credits from the non-accredited institution will be considered only at that time. Once admitted, all transfer students from non-accredited institutions are expected to maintain the same academic standards required of those students already enrolled in the university.

# Academic Requirements for Consideration as Transfer Students

Admission to Shippensburg University may be granted to transfer students whose records indicate reasonable probability of success. Certain programs, such as business, elementary education, biology, criminal justice, etc., require a higher quality point average for consideration. Please consult with the Office of Admissions for details. Non-transferable courses are not used in calculating cumulative quality point averages including developmental or remedial courses and vocational/occupational/technical courses. In evaluating a transfer student's application for admission, the university may take into account the total record in high school and college, quality of courses, test scores, and interviews. The major criterion used by the university in evaluating an applicant for admission is the overall quality of previous achievement.

Once admitted, all transfer students are expected to maintain the same academic standards required of those students already enrolled in the university.

## Pennsylvania State System Student Transfer Policy

The Student Transfer Policy is designed to promote the transfer of students from Pennsylvania community colleges to Shippensburg University and to support the transfer of undergraduate courses earned by students at other PA State System of Higher Education institutions. This encourages a seamless transfer for students into the University without unnecessary repetition of learning that has already been completed at another institution. Your coursework is applicable to the policy if you earned an Associate of Arts or an Associate of Science degree at one of the following community colleges or are an incumbent student of a State System institution with a 2.0 GPA or above.

At Shippensburg University, policy privileges apply only to students seeking transfer from a Pennsylvania community college, a Pennsylvania State System of Higher Education university, Lackawanna College, Raritan Valley Community College, Middlesex Community College, and the following community colleges in Maryland: Carroll, Frederick, Hagerstown, and Allegany College of Maryland.

Provisions provided under the Pennsylvania State System of Higher Education Student Transfer Policy

All college-level credits from regionally accredited institutions will be accepted in transfer, regardless of how the prior learning was acquired. The intent of this policy is to maximize the application of college-level credits awarded by regionally accredited institutions.

Shippensburg University will first apply as many college-level credits as possible toward the satisfaction of general education requirements, then to requirements in the major and finally to elective credits. A course by course match will not be required for general education courses. Vocational, technical and career courses may fulfill major curricular requirements or credits required for graduation in specific programs. Developmental and remedial coursework will not transfer.

### 1. Students transferring with an Associate Degree:

Admission to a State System university is guaranteed within the established university time frame for undergraduate students transferring from a Pennsylvania Community College with an Associate degree in an identified or a parallel P2P agreement, but not to specific major or degree programs. The requirements for admission to an academic program will be the same for native and transfer students. Students will receive junior standing. Exceptions such as a Criminal Conviction of a Felony Offense or Dismissal from a Previous Institution for Disciplinary Reasons, will be handled on a case-by-case basis.

## **2. Students transferring from a State System University**

- a) Admission to a State System university within the established university time frame is guaranteed for undergraduate students transferring from one State System University to another State System University with at least 12 credits and a 2.0 GPA or above, but not to specific major or degree programs. The requirements for admission to an academic program will be the same for native and transfer students. Exceptions such as a Criminal Conviction of a Felony Offense or Dismissal from a Previous Institution for Disciplinary Reasons, will be handled on a case-by-case basis.
- b) Students transferring to Shippensburg University from another State System Institution who have completed the their general education program will have their general education requirements met at Shippensburg University unless their program has unique, specific general education requirements.

## **3. Students Transferring without an Associate Degree**

- a) Pennsylvania community college students who seek to transfer **WITHOUT** a degree may apply to and be accepted by Shippensburg University.
- b) Students seeking to transfer course credits without the completed A.S. or A.A. degree must have a minimum cumulative GPA of 2.0 in all coursework presented for transfer for each institution attended. Capacity limits and/or higher admissions standards may apply to certain high demand.
- c) For students that have transferred from a PA community college without having earned their associate degree may be eligible to earn an A.A. or A.S. from their sending institution through Reverse Transfer. Credits earned while working toward their bachelor degree will be sent to the PA Community College for evaluation for possible credit towards the completion of the associate degree requirements.

4. Students from Pennsylvania community colleges and State System universities may transfer credits in courses where the grade of "D" is earned only if the student has an overall GPA of 2.0 or higher from each institution attended. Some academic programs at Shippensburg University may require the student to repeat certain courses in which a "D" grade was earned.

# **Dual Admission Programs**

Shippensburg University maintains Dual Admission programs with the following community colleges: Harrisburg Area, Hagerstown, Frederick, Carroll, and Allegany College of Maryland. This program provides career and library services at Shippensburg University while the student is attending the community college as well as academic advisement to ensure the optimal transferability of credits. Dual Admission students must maintain continuous enrollment, and earn the associate's degree to receive the discounted tuition rate available to out-of-state Dual Admission participants. For more information, contact the Office of Admissions at Shippensburg University or one of the above named community colleges. Additional agreements are currently in process.

# **Acceptance and Application of Credits**

All college-level credits from regionally accredited institutions will be accepted in transfer, regardless of how the prior learning was acquired. The intent of this policy is to maximize the application of college-level credits awarded by regionally accredited institutions.

Shippensburg University will first apply as many college-level credits as possible toward the satisfaction of general education requirements, then to requirements in the major and finally to elective credits. A course by course match will not be required for general education courses. Vocational, technical and career courses may fulfill major curricular requirements or credits required for graduation in specific programs. Developmental and remedial coursework will not transfer.

## Transcript Evaluation and Credit

Transcripts submitted to meet entrance requirements by transfer students are evaluated by the dean of the college to which the student has applied. The transcript will be evaluated officially when the applicant has been formally admitted to the university. In most cases, the official evaluation of the student's transcript will be mailed along with the letter of admission.

Transfer credit will be awarded for equivalent Shippensburg University courses whenever appropriate. If there is not an equivalent course, credit will be awarded based on the academic discipline and type of course. Developmental and vocational courses will not be accepted as transfer credit.

Students who feel the original evaluation of their transfer credit is not correct may request another review by their academic dean's office. Shippensburg University will work with transfer students to ensure credit is awarded in the most appropriate way possible.

## Reverse Transfer

Reverse transfer is the transfer of credits from a four-year institution to a two-year institution from which a student transferred from. It provides an opportunity for these students to receive an associate's degree once they have earned a combined total of at least 60 credits from both institutions. Eligible students can receive a first associate's degree that accurately reflects their educational attainment and allows them to compete more successfully in higher education and the workforce, even as he or she continues working toward a bachelor's degree or other certification or credential.

### Eligibility

Students who have transferred to Shippensburg University (SU) benefit from Reverse Transfer agreements that have been established between all Pennsylvania Community Colleges and Pennsylvania's State System of Higher Education, as well as an agreement that has been established between SU and Hagerstown Community College.

For students who began their post-secondary education at a **community college in Pennsylvania**, they must have earned at least 45 credits, including those earned through Prior Learning Assessment (PLA), Advanced Placement (AP), College Level Examination Program (CLEP), Credit by Exam and the military, before transferring to a SU, from which they have earned at least 15 additional credits, excluding remedial and developmental credits.

For those students who began their post-secondary education at **Hagerstown Community College**, they must have earned at least 15 credits before transferring to SU. They must have earned at least 60 or more credits in total (including transfer and SU credits), excluding remedial and developmental credits.

### How will the degree be awarded?

Qualified students will fill out a Reverse Transfer Agreement Release form, which will allow transcripts and contact information to be sent to the community college for review. The community college will review the eligible student's transcripts and make that determination. It will use upper-level courses to fulfill the community college's degree requirements when applicable. It also may determine if a student is eligible for an associate's degree in a program other than the intended program of study, based on courses completed at SU. Once the review is complete, the community college will submit a new student transcript to SU that denotes the conferment of the associate's degree.

# Degree Completion Program

Shippensburg University offers degree completion options for transfer students. For our current offerings, go to [www.ship.edu/pcde](http://www.ship.edu/pcde). For questions, please contact the Office of Admissions at 717-477-1231.

## Homeschooled Applicants

Shippensburg University welcomes applications from students who have been homeschooled. Please review the guidelines under the freshman/transfer sections as well as the following information:

1. Homeschooled applicants are required to submit grade transcripts if available and also the official evaluation for each grade 9-11 (should be an estimated two pages in length and are an analysis of the student's annual portfolio). A final grade transcript (if applicable) and evaluation must be submitted when the final year of homeschooling is complete.
2. All homeschooled applicants are also required to submit at least one set of scores on the SAT I: Reasoning Test of the College Entrance Examination Board or American College Test (ACT).
3. If an official high school diploma is NOT being awarded by an agency, homeschooled applicants must submit a copy of the General Education Development Exam (GED) diploma and also the GED scores from the five sections of the test. This information must be mailed directly from the Department of Education of the state issuing the diploma.
4. Interviews for homeschooled applicants are not required, but are strongly encouraged for those students who will be graduating when they are less than 17 years old.

For additional information regarding a special situation, please contact the Office of Admissions for more information.

## Options for Admissions

### Honors Program

The Shippensburg University Honors Program admits outstanding students who will thrive in an atmosphere of creative learning and intellectual exploration. The program welcomes applications from high school seniors, first semester freshmen, and transfer students. Entering freshmen should have a minimum SAT score of 1200 and rank in the upper fifth of their high school class. First semester freshmen and transfer students must have a minimum 3.25 grade point average to be eligible for membership in the program. Evidence of leadership and active involvement in community service projects are also considered in admissions decisions.

Application forms for high school seniors, first semester freshmen, and transfer students are available on the Honors Program's website at <http://www.ship.edu/honors> or by contacting the Honors Program at 717-477-1604 or [honors@ship.edu](mailto:honors@ship.edu).

### Early Admission

The university offers an early admission plan as a desirable option for those mature and academically talented students who are fully ready for college before completion of the 12th year of high school.

The early admission of full-time students should be reserved for those high school students who, in the judgment of both the secondary school and the university, are clearly outstanding academically and who demonstrate the personal maturity necessary for successful adjustment to the university. Normally such students will have exceeded the

academic limits of their secondary schools and will have attained a level of maturity greater than that of their chronological peers. They should be able to logically justify reasons for early entrance. Since an assessment of social maturity is a consideration, the university requires a personal interview of all early admission candidates. With the needs of the student in mind, the institution is obligated to consider whether the first year of the university or the last year of the secondary school will be more beneficial for the student, given the student's academic ability and maturity.

The usual academic guidelines for the selection of students through Early Admission are:

1. Rank in the upper ten percent of the high school class.
2. College Board SAT I scores totaling at least 1100 with a verbal score of at least 500.
3. Must have followed a college preparatory or academic high school program to the end of the eleventh year with at least three years of English, three years of college preparatory mathematics, at least two laboratory sciences, including biology, two social sciences, and two years of the same foreign language.
4. A letter of recommendation from the high school guidance counselor or principal.
5. A letter from the candidate's parents supporting the application for early admission.
6. A personal interview with a member of the admissions staff.
7. The high school must agree to issuing a high school diploma to the student upon successfully completing the freshman year as a student at Shippensburg.

The Dean of Admissions may use early admission for academically talented students who are fully ready for the university. However, it is not in the best interest of those not fully qualified either academically or personally to apply for early admission. Please write or call the Office of Admissions for information pertaining to application procedures.

## **Ship Start (Concurrent High School Enrollment)**

Ship Start is an early to college program for high school students. These students can be enrolled part-time or full-time in university-level courses while concurrently completing secondary school requirements. Ship Start offers opportunities for those students to enrich their high school program while at the same time functioning within their traditional peer groups. The student might also wish to engage in university-level courses during the summer sessions. This program may be desirable to individuals as long as the student is capable of handling the academic demands involved. Students should first exhaust all required course options in high school before considering becoming a Ship Start student. The following guidelines apply for Ship Start students:

1. Must have completed at least the tenth grade year of high school.
2. Must submit official high school transcript and SAT or ACT scores. College Board SAT scores should total at least an 1100 or an ACT score equivalent to a 22 composite score.
3. Must submit the Ship Start - Early to College Application.
4. Must submit the Consent & Registration Form signed by school counselor as well as parent or guardian demonstrating approval of participation

For more information visit <http://www.ship.edu/shipstart/> or call the Office of Admissions for information pertaining to application materials and procedures.

## **Academic Success/Summer Bridge Program**

Students who do not meet regular admission criteria but who have demonstrated the potential, desire, and motivation to succeed in college may be able to gain admission to Shippensburg by successfully completing the Academic Success/Summer Bridge Program. Students who are offered this option enroll in two courses during the summer and are required to participate in Summer Bridge programming as assigned. Students must pay for summer tuition and room and board for the five week summer term, unless they meet the ACT 101 (Pennsylvania's Higher Education Equal Opportunity Program) income guidelines. Students are also required to pay for their textbooks.

Details are located in the School of Academic Programs and Services chapter in this catalog or at [www.ship.edu/asp](http://www.ship.edu/asp).

# Non-Degree Status

Shippensburg University provides educational learning experiences for interested adults on a part-time basis. Undergraduate courses for college credit are available for high school graduates or those who have achieved equivalency status as well as for students who have received a bachelor's degree but are not interested in pursuing a master's degree or certification.

This non-degree status is for those who wish to add to their specific subject area knowledge, to review or improve certain skills, or to broaden their interests. Non-degree students will be scheduled after degree-seeking students to ensure space exists for regularly admitted students. Contact the Office of Professional, Continuing and Distance Education for more information.

Non-degree students who wish to matriculate must apply through the regular admission process. All prerequisite course work requirements of degree-seeking students apply to non-degree students. A maximum of 30 credit hours earned in non-degree status may be credited toward an undergraduate degree. Non-degree students are required to meet the minimum academic standards outlined under Academic Policies and Procedures.

Individuals who apply for regular admission and are denied may not attend the university as a non-degree student.

# Visiting Students

Visiting students are those who wish to enter the institution for the purpose of earning credit to be used for graduation at another institution. Please refer to Visiting Student Program under Academic Policies and Procedures for State System participants. These students should contact the Registrar's Office at Shippensburg University concerning application procedures.

# International Students

Applicants from outside the United States who do not hold nonimmigrant visas or a permanent resident/resident alien status must complete a Shippensburg University Undergraduate international application for admission. Useful information can be obtained at [www.ship.edu/admissions/international](http://www.ship.edu/admissions/international). Check the web site for application deadlines.

1. You are encouraged to submit the application online at [www.ship.edu/admissions/apply](http://www.ship.edu/admissions/apply) or request a paper application from the Office of Admissions by emailing [admiss@ship.edu](mailto:admiss@ship.edu). A \$45 application fee is required. Payment can be made online with the application or submit a check that includes a banking bar code or a money order. We will not accept paper currency.
2. For evaluation purposes, an official copy of the complete academic record/transcripts including courses and grades from the secondary school (and, if appropriate, post-secondary school) must be sent from those institutions directly to one of the following professional credential evaluation services. A Course-by-Course (Cx) report IS REQUIRED of those applying to or who wish to transfer credit into any of our degree programs.

Educational Credential Evaluators, Inc. (ECE)  
P.O. Box 514070  
Milwaukee, WI 53203-3470, USA  
ECE Phone number: 414-289-3400  
ECE Fax number: 414-289-3411  
ECE E-mail: [eval@ece.org](mailto:eval@ece.org)  
ECE Website: [www.ece.org](http://www.ece.org)

**or**



World Education Services (WES)  
P.O. Box 745, Old Chelsea Station  
New York, NY 10011-0745, USA  
WES Phone number: 212-966-6311 or 800-937-3895  
WES Fax number: 212-966-6395  
WES E-mail: info@wes.org  
WES Website: www.wes.org

ECE or WES will then forward their official evaluation of your credentials to the Office of Admissions. You need not supply a copy of your official high school or post-secondary record/transcript.

1. International Applicants who speak English as a second language must present an official TOEFL scores report (sent directly from Educational Testing Services, ETS). Students may choose to take the IELTS; an official score report must be sent directly from British Council et al. We will accept scores from the paper-based, computer-based, or internet-based TOEFL. Students whose native language is English must take and submit SAT Test scores and may not take the TOEFL or IELTS.
2. Immigration regulations require the student's sponsor to complete the Statement of Financial Support for International Students and supply documentation to demonstrate the capacity to meet educational and related expenses. A student's sponsor may include parent(s), guardian(s), a government or international agency. Once these documents have been processed and approved, the Office of Admissions will notify the student of their status. In order to receive the I-20 document (required to apply for F-1 student visa), you must be admitted to the degree program AND have your financial information (statement of financial support, current bank statement, and income verification) approved by our Director of International Programs. An I-20 will not be issued prior to receiving and reviewing all required documents.

International students are required to pay out-of-state tuition and are not permitted to work off campus without proper authorization. Limited on-campus employment is sometimes available for qualified students after their first semester. All international students are required to carry adequate health and accident insurance.

Immediately upon arrival on campus, holders of F-1 visas are required to report to the Director of International Programs, Ceddia Union Building, bringing with them their passport, I-94, I-20, and visa.

Further questions regarding international students at Shippensburg University should be addressed to the Office of International Programs, Ceddia Union Building, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257-2299 USA, 717-477-1279 or email [internationalprograms@ship.edu](mailto:internationalprograms@ship.edu). Online at [www.ship.edu/international](http://www.ship.edu/international).

## **Commonwealth Tuition Waiver (John F. Kennedy) Award**

The Commonwealth of Pennsylvania grants a limited number of tuition waiver awards at each of the fourteen state universities. The award is a remission of out-of-state tuition costs, but does not cover room and board, insurance, activities fee, or residence hall room deposits.

Any non-U.S. citizen eligible for an F-1 undergraduate student visa may apply for this award *making formal application to the university*. However, only a limited number of awards are available in any given year. Once an international student has been granted a tuition waiver, the award is renewable on a semester-by-semester basis for as long as the review committee considers reasonable for the completion of the student's academic program. This renewal is contingent upon full-time student status, an acceptable grade point average, and participation in the International Student Organization. If a student is seeking fall admission, application for the waiver should be made by May 1 of the same year. If a student is seeking spring admission, application for the waiver should be made by December 1 of the previous year. Interested applicants must gain admission and acceptance into the university before consideration for the scholarship can be granted. Recipients of the JFK tuition reduction must live on campus and have a meal plan for the

duration of their first academic year. Applications for the JFK Tuition Waiver can be submitted along with application for admission. The forms can be obtained at [www.ship.edu/International/International\\_Students/JFK\\_Process](http://www.ship.edu/International/International_Students/JFK_Process).

## **Post-Baccalaureate Graduates Seeking Certification**

Students who have a four-year degree and are interested in earning teacher certification must have achieved a 3.0 grade point average in their baccalaureate degree program. Those interested in teacher certification should contact the Dean of the College of Education and Human Services at 717-477-1141 for an application. Those seeking a master's degree along with certification courses should enroll through the Office of Admissions at 717-477-1231. The certification portion of the master's program will be developed by the Dean of the College of Education and Human Services.

## **Readmission of Former Students**

Students who previously attended Shippensburg University and wish to resume their studies must apply through the Registrar's Office (not the Admissions Office) for readmission.

For more information on applying, see Readmission of Students in the Academic Policies and Procedures chapter or contact the Registrar's Office at 717-477-1381.

## **Choice of Major**

Enrollment is limited in certain majors and programs offered by the university. Applicants who meet criteria for admission to the university, but who cannot be accommodated in the major or program of their first choice may be offered admission into another major. Those choosing to enter the university as an exploratory student must meet all departmental requirements and prerequisites for the major they eventually select. Students transferring to Shippensburg University with more than 30 college-level credits must declare a major.

Exploratory students should be aware there is no assurance they will be able to declare any major they choose. Programs with limited capacity may be restricted or closed.

## **Falsification of Records**

Students furnishing the university with false, misleading, or incomplete information relating to their application for admission or academic record will be subject to denial or dismissal.

## **Academic Policies and Procedures**

Once you are admitted to Shippensburg University, you will need to understand and follow all academic policies and procedures in order to successfully complete your course of study. University officials such as your faculty advisor, department chair, and academic dean can provide assistance, but it is ultimately your responsibility to be aware of policies relating to grading, academic progress, withdrawal from courses, declaring or changing majors, and requirements for graduation. This chapter explains the general academic policies. The chapter, University Curricula, discusses the particular degree programs, majors, and the general education requirements.

## **Applicable Policies**

In general, you will be subject to the academic policies and degree requirements that are in effect during the semester you matriculate at Shippensburg University. You matriculate by registering for and starting an academic semester as a degree-seeking student. You do not need to declare a major in order to matriculate. If you begin taking classes in the summer, you will be considered as matriculating in the fall semester.

This catalog is intended to be a description of the policies, academic programs, degree requirements, and course offerings in effect for the 2016-2017 and 2017-2018 academic years. It should not be construed as a contract between the student and the university. Shippensburg University reserves the right to change any of the policies and procedures contained in this catalog and to apply these changes to any or all of its students as it sees fit. The university may also choose to add or delete course offerings or degree programs at any time.

## Time Definition

Many of the policies in this catalog refer to time periods such as the first week of the semester. A week of the semester (or week of classes) is defined as seven calendar days beginning with and including the first day of daytime classes. For example, if daytime classes begin on a Thursday, the first week of the semester ends the following Wednesday at the official closing time of university offices (usually 4:30 p.m.).

## Student Outcome Assessment

An essential aspect of the mission of Shippensburg University is the evaluation of educational input and student learning. You will be expected to participate in some phase of program evaluation activities such as standardized tests, questionnaires, and personal interviews. Students will be randomly selected beginning with freshman orientation and continuing through graduation. Participation in this program of evaluation will assist in providing sound academic learning experiences for you as well as future students at Shippensburg University.

## Grading and Point System

To understand many of the university's academic policies and procedures, you first need to understand the grading system. The following system of grades is used to indicate the quality of academic work:

### Regular Letter Grades

- A    Excellent
- A-
- B+
- B    Good
- B-
- C+
- C    Satisfactory
- D    Unsatisfactory, but passing

F Failure

**Special Grades**

I Incomplete

Q Deferred grade

S Satisfactory

U Unsatisfactory

P Passed

T Credit By Exam

TR Transfer Credit

N Audit (no credit)

The plus/minus system of letter grades took effect with the 1992 fall semester. Before then, the only regular letter grades were A, B, C, D, and F. Individual faculty members may choose to continue using single letter grades and not award plus/minus grades.

In certain cases, a grade of D may not be considered passing; and you may be required to repeat the course by your major department.

## **Quality Point Average (QPA)**

Your quality point average or QPA is determined by assigning numerical values to the letter marks and weighing them according to the number of class hours. The values assigned to the letters are:

A 4.0 quality points

A- 3.7 quality points

B+ 3.3 quality points

B 3.0 quality points

B- 2.7 quality points

C+ 2.3 quality points

C 2.0 quality points

D 1.0 quality points

F 0.0 quality points

To calculate your QPA, follow these steps:

1. Compute the number of quality points earned for each course by multiplying the value of your letter grade by the number of credits earned. For example, your grade of B+ (3.3 points) in a 3-credit course earns you 9.9 quality points.
2. Add up the quality points earned in all your classes.
3. Add up the number of credits attempted in all your classes. This total should include all classes in which you received a regular letter grade (A through F).
4. Divide the total number of quality points earned by the total number of credits attempted. This is your QPA. Only courses in which you received a regular letter grade (A through F) are used in calculating your QPA. Courses you have repeated will have an impact on the way your QPA is calculated. See the section on Repeated Courses for details.

The following example illustrates how to calculate your QPA for one semester:

Course	Credits	Grade	Qty. Pts. Earned	
1st subject	3	B-	3 x 2.7 =	8.1
2nd subject	3	A	3 x 4.0 =	12.0
3rd subject	3	F	3 x 0.0 =	0.0
4th subject	4	B	4 x 3.0 =	12.0
5th subject	3	B	3 x 3.0 =	9.0
Total	16			41.1

Quality Point Average =  $41.1/16 = 2.56$

Your *semester QPA* is the average for one semester or summer term, while your *cumulative QPA* refers to the average for all courses completed at Shippensburg.

## Temporary Grades ('Q' and 'I')

The grades 'Q' and 'I' are temporary grades, which mean you have not completed all the requirements for a particular course. Apply to your college dean if you are unable to complete the requirements of all your courses.

With prior approval of the appropriate dean, the grade of Q (deferred grade) may be awarded for courses such as research, thesis, and internship, which are designed to extend over more than one grade period. If you receive a Q grade in a course, you should work closely with the instructor to plan a schedule in order to complete the work within a specified time period (maximum of three years) or the grade will convert to an F.

The grade of I (incomplete) should only be requested if you have successfully completed a majority of the work for the course and due to overwhelming and unavoidable circumstances that are beyond your control (e.g., serious illness, death in the family), you are unable to complete all the requirements of the course. Being awarded an I is a privilege not a right of the student and the decision to grant an incomplete grade rests solely with the course instructor. When permission is granted by a faculty member, the approval signature affirms that the remaining assignments/requirements will be communicated to the student.

Stipulations regarding incomplete grades:

- Students should rarely request an incomplete grade.
- You must be passing the course and be able to complete the remaining course assignments without attending additional classes or needing additional instruction from the faculty member. Incomplete grades are typically

awarded near the end of the semester when only a small amount of graded materials is required of the student.

- If you do not complete the work for a course in which you received a grade of I by the last day of classes (before final exam week) of the next full semester, you will receive a grade of F for that course.
- If the student is failing a course, an I cannot be awarded in place of the failing grade.

Incompletes can be extremely problematic:

- You cannot graduate from the university with a temporary grade on your record.
- An incomplete grade does not prevent academic action for dismissal.
- Incomplete grades affect the number of credits earned in the short term and may have an impact on financial aid eligibility, athletic eligibility, or visa status for international students.

## Satisfactory-Unsatisfactory Option

The grades S and U are used for courses that are taken under the satisfactory-unsatisfactory option. If you have completed at least one academic year (30 semester hours) at Shippensburg University and are maintaining a cumulative QPA of 2.5 or better, you may schedule up to a maximum of three credits (or one four credit course) per semester under the satisfactory-unsatisfactory option. Transfer students with more than 30 semester hours accepted in transfer may adopt the satisfactory-unsatisfactory option for their first semester at Shippensburg.

Certain policies and procedures pertain to this option:

- You may adopt or rescind the satisfactory-unsatisfactory option during the first two weeks of the regular fall or spring semester. No changes may be made after the deadline. Only full-time students are eligible. You must visit [http://www.ship.edu/Registrar/Registrar\\_Office\\_Forms/](http://www.ship.edu/Registrar/Registrar_Office_Forms/) to submit the online web form to request this option.
- The maximum number of credits you may schedule under the satisfactory-unsatisfactory option while attending Shippensburg University will not exceed ten.
- Only courses taken outside your major and/or minor field may be scheduled on the satisfactory-unsatisfactory basis. Courses in the professional education sequence are considered a part of major requirements and therefore may not be taken satisfactory-unsatisfactory. Independent study may not be taken satisfactory-unsatisfactory.
- Under this option, you will not be identified to the instructor of the course and all students will continue to be graded on a letter basis. Grades will be submitted to the registrar's office, which will convert grades to satisfactory-unsatisfactory when applicable. Satisfactory shall be defined as A, B, or C on the conventional grading system and shall be recorded on the transcript as S (satisfactory). If you receive a D or F grade you will have this grade recorded on the transcript as U (unsatisfactory). The transcript will include a legend explaining the satisfactory-unsatisfactory grading system.
- Grades received from courses taken on the satisfactory-unsatisfactory basis will not be used in determining the cumulative quality point average. If you receive a grade of S, the credits earned will be recorded toward graduation requirements; however, no credit will be earned if a grade of U is assigned.
- You may not schedule more than one course on a satisfactory-unsatisfactory basis in a given department or in a required sequence of course offerings within a major. The five required courses in general education may not be taken on a satisfactory-unsatisfactory basis.
- You may select the satisfactory-unsatisfactory option during the summer or winter terms if you are a full-time student during the regular semester. No changes to the satisfactory-unsatisfactory option may be made after the drop period for any summer or winter term.

## Other Types of Grades

A grade of P is given for courses where you successfully complete the requirements of the course and a letter grade is not appropriate. Examples of such courses include internships and other field experiences. If you register for such a course and do not complete the requirements, a grade of F will be given.

T grades are used to indicate credits earned through examination rather than by attending classes. See the section Credit by Examination for details.

Credits you earn at another institution that are accepted towards your degree at Shippensburg are indicated with a grade of TR. See the Transfer Credits section for further details.

Credits earned with grades of P, T, or TR will be counted towards the total number of credits required for your degree, but they are not used in calculating your QPA.

A grade of N indicates you have audited a class. When you audit, you can attend class and participate in class activities, but you do not receive academic credit. You may audit a course by receiving the written permission of the instructor and approval of your dean on an audit form. This form must be returned to the registrar's office during the first week of the semester. You must schedule and pay the regular fee for any courses you audit, and you may not receive credit or a grade for these courses at a later date.

W grades indicate courses from which you withdrew. Further information may be found in the Withdrawal from a Class section.

## Academic Progress and Standing

Your progress in each class is regularly evaluated by the instructor of the course. Instructors schedule regular office hours to allow you to confer regarding academic achievements or particular problems with course work. At the end of each semester a final grade is recorded on your permanent record for each course taken.

Students are officially classified according to the number of credit hours completed as follows:

Freshman	0-29 credit hours
Sophomore	30-59 credit hours
Junior	60-89 credit hours
Senior	90 or more credit hours

Students classified as juniors or seniors are considered to be upperclassmen.

## Issuance of Grades

In accordance with the Family Educational Rights and Privacy Act, commonly known as the Buckley Amendment, students are provided with privacy safeguards of their educational records. The university provides reports of progress including grades, written evaluations, and letters of warning. You may have access to all information pertaining to your educational records and academic status.

During your academic career, you will receive early warning reports. These reports, which do not become part of your academic record, are intended to warn you about classes you are in danger of failing. The early warning reports are posted on the myShip portal, and a notification of availability of early warning grades is sent to your university e-mail account.

# Dean's List

A dean's list is published at the end of each semester of the academic year. It includes the names of those full-time students whose semester QPA is 3.50 or better. Only the course work completed in the current term is considered in computing this score. The achievement of the high academic status, which this listing represents, is a great honor to the student's ability and willingness to work.

If you are a part-time student, you are eligible for dean's list any semester in which you have a QPA of 3.50 or better in the last 15 or more sequential credits of part-time work, including summer and winter term courses, if taken. These credits must have been earned since your last inclusion on the dean's list. You must apply to your academic dean to have part-time dean's list honors recorded on your academic record.

## Grade Appeals Procedure

### (I) Introduction

An undergraduate student contemplating filing a grade appeal understands that consistent with the practice of academic freedom, faculty bear responsibility for assigning course grades in accordance with professionally acceptable standards which have previously been communicated to students verbally or in writing. At the same time, students have a right to ensure that grades are calculated accurately and consistently, fairly and equitably, and without discrimination.

**Note:** *Any grade appeals or grade change requests initiated on the basis of alleged academic dishonesty shall be handled under the procedures set forth for academic dishonesty discussed later in this chapter.*

### (II) Basis for Appealing a Final Course Grade

Undergraduate students may appeal a final course grade assigned to them by an instructor based on one of three conditions:

1. The course instructor miscalculated the final course grade.
2. The course instructor committed an oversight in calculating the final course grade.
3. The course instructor acted in an arbitrary, and/or capricious manner in assigning grades to the student, including the final course grade.

For an instructor to act in an arbitrary and/or capricious manner in assigning grades is defined as follows:

- a. The instructor assigned a course grade to a student on some basis other than performance in the course
- b. The instructor assigned a course grade to a student by resorting to unreasonable standards different from those which were applied to other students in that course
- c. The instructor assigned a course grade to a student in a manner that represented a substantial, unreasonable, and unannounced departure from the instructor's previously articulated standards.

### (III) Selection and Composition of the Academic Appeals Committee

The Academic Appeals Committee of the department shall consist of a minimum of three regular tenure-track faculty members in the department (excluding the department chairperson) and an equal number of undergraduate students who are majors in the department, with a faculty member and student serving as co-chairs. In the event a faculty or student member of the Academic Appeals Committee is a party in a grade appeal, an alternate previously selected shall serve in his or her place.

Within the first week of the fall semester, each academic department shall elect at least three faculty members and one faculty member alternate to serve on the Academic Appeals Committee for the academic year and designate three undergraduate students and one undergraduate alternate enrolled in the academic department to serve on the Academic Appeals Committee. Each academic department shall develop a standard process for selecting student members for the Academic Appeals Committee. By the end of the first full week of the fall semester, the names of the faculty and



student members of the Academic Appeals Committee and alternates selected for each academic year shall then be forwarded to the dean's office of the college within which the department is located. In the event a department lacks sufficient faculty to staff the Academic Appeals Committee and provide a faculty alternate member, it shall notify the dean of the college in which the department is located. The Dean's Office shall provide assistance in identifying a suitable pool of faculty from the college to staff the Academic Appeals Committee and provide an alternate member for the committee if the need should arise.

#### **(IV) Timetable and Procedures for the Grade Appeal Process**

Compliance with all timelines set forth in this policy is required.

A student may initiate a grade appeal within thirty (30) calendar days following the first day of the next regular (fall or spring) academic semester. However, appeals from the winter term shall be filed within sixty (60) calendar days following the first day of spring semester; appeals from the summer terms shall be filed within thirty (30) calendar days from the first day of fall semester. Should the deadline for completing a step in the grade appeal process set forth below fall on a day the university is not open for business, that deadline shall be moved to the next date the university is open for business

In the event a faculty member, department chairperson (or chair of the department's Professional Affairs Committee if necessary) fails to comply with the timelines or procedures set forth in this policy, the student shall have the right to appeal to the dean of the college in which the appeal has arisen. If the dean determines the student's rights under this policy have been violated he or she shall direct the department to schedule the Formal Grade Appeal Hearing in a timely fashion consistent with the intent of the policy.

**A. Meeting with the Faculty Member Assigning the Final Course Grade**-Following notification of a final grade assigned in a course a student disagreeing with a final course grade shall meet informally with the course instructor at a mutually acceptable place in an effort to resolve the matter, prior to resorting to the formal appeal process.\* Either party may choose to have another person present at this meeting. This informal meeting between the student and the faculty member assigning the disputed grade shall occur no later than thirty (30) calendar days following the onset of the next regular (fall or spring) academic semester.\*\* If the faculty member finds in favor of the student, a grade change will be sent to the Registrar's Office after the department chair has signed the grade change form. A copy will be sent to the student. However, if the faculty member decides the grade as given was correct, the student will be notified in writing within seven (7) calendar days. Students who are not satisfied with the results may initiate a formal appeal of the final grade assigned in the course, as outlined below.

*\*In the event the faculty member assigning the final grade in the course is no longer an employee of Shippensburg University the student desiring to appeal a course grade shall meet with the department chairperson to establish procedures consistent with this policy and past practice for entertaining the desired grade appeal.*

*\*\*Shippensburg University policy permits faculty members to change grades if there has been a miscalculation or oversight in grading, but not on the basis of additional student work or revision of previously accepted work.*

**B. Initiating a Formal Grade Appeal**-A student wishing to formally appeal a final course grade based on the factors listed in Section II, Basis for Appealing a Final Course Grade, must file a written appeal with the chairperson of the academic department home to the course whose grade they are seeking to appeal no later than thirty (30) calendar days following the first day of the next regular (fall or spring) academic semester. Appeals from the winter term shall be filed within sixty (60) calendar days following the first day of spring semester; appeals from the summer terms shall be filed within thirty (30) calendar days from the first day of fall semester.

Formal appeals from the spring semester and summer terms shall be filed no later than thirty (30) calendar days from the first day of the fall semester; formal appeals from the fall semester shall be filed no later than thirty (30) calendar days from the first day of the spring semester; formal appeals from winter term shall be filed no later than sixty (60) calendar days from the first day of spring semester. Failure to meet the deadline for formally filing a grade appeal shall result in the forfeiture of a student's appeal rights.

A student wishing to pursue a grade appeal shall by this date\*\*\* submit to the department chairperson (or chair of the department's Professional Affairs Committee in the event that the student is appealing a grade assigned by the department chairperson) the completed grade appeal form, signed and dated, and supporting documentation which sets forth the basis for the appeal and the desired resolution. An undergraduate grade appeal form may be obtained in the department office of the major/program where the appeal is filed or from an academic dean's office. Formal Grade Appeals may not be filed electronically; a fax with legal signature is acceptable.

*\*\*\*Both the informal attempt at resolving the disputed grade with the faculty member assigning such grade and the formal initiation of the formal grade appeal must be completed no later than thirty (30) calendar days following the first day of the next regular (fall or spring) academic semester. Winter term formal appeals must be initiated no later than sixty (60) days following the first day of the subsequent spring semester.*

**C. Meeting with Department Chairperson-**Within seven (7) calendar days of receiving a completed grade appeal form, the department chairperson (or designee) will notify the faculty member that a formal appeal has been filed and shall meet individually and/or jointly, if useful, with the student and the faculty member to discuss the disputed grade in an effort to mediate an amicable resolution to disagreement over the final grade assigned. Such meeting(s) may occur in person or via conference call if necessary. The mediated result must be given in writing to both the student and faculty.

**D. Formal Departmental Grade Appeal Hearing-**If the student finds that the mediated effort fails to address his or her concerns or achieve the desired results, he or she must notify the department chairperson in writing within fourteen (14) calendar days of the meeting with the department chairperson (or designee) of his or her desire to continue on to the formal grade appeal hearing before the Academic Appeals Committee of the department. Failure to meet this fourteen (14) day deadline for proceeding with the formal grade appeal shall result in the forfeiture of a student's appeal rights.

1. Scheduling of the Academic Appeals Hearing-Upon notification by the student of his or her desire to continue with the appeal, the Academic Appeals Committee shall have fourteen (14) calendar days to conduct a hearing on the matter and to issue its findings and recommendations.
2. An equal number of students and faculty, but in no case fewer than four members, shall be present at the Appeals Hearing.
3. Conduct of the Academic Appeals Hearing-The chairpersons of the Academic Appeals Committee shall have sole responsibility for the conduct of the hearing. Prior to the hearing the student shall submit to the committee a written statement setting forth the issue(s) in the dispute and the desired resolution. Only the student and the faculty member in the dispute have the right to attend the hearing. Both the student and faculty member involved in the grade appeal shall have the right to be present during the grade appeal hearing itself. Both the student and the faculty member have the right to introduce materials into the hearing that are directly relevant to the assignment of the final grade in the course, including such items as:
  - Course syllabi as given to the student
  - Graded assignments such as, but not limited to, journals, research papers, group projects, examinations
  - Other material relevant to the determination of the student's final course grade

**E. Decision of the Academic Appeals Committee-**Only members of the undergraduate Academic Appeals Committee shall be present during the discussion of and deliberations on the outcome of the student's grade appeal. The Academic Appeals Committee's deliberations shall be viewed as confidential and no transcripts, notes, or records shall be made regarding their discussion other than a record of their final decision. The record of the final decision will be maintained in the department office for three years. The committee has the power to decide the outcome of the final grade dispute by simple majority vote taken by secret ballot. A tie vote upholds the faculty member's decision in the case. If the committee sustains the appeal (i.e., rules in favor of the student) a grade change form will be sent to the Registrar's Office after being signed by the department chair. With the exception of the grade, no part of these proceedings will become part of the student's official academic record. In addition, no part of these proceedings will become part of the faculty member's record or file. The evidence, proceedings, and the final decision of the Academic Appeals Committee shall remain confidential.

#### **(V) Request for Reconsideration**

A student whose grade appeal has been denied may file a written request for reconsideration within seven (7) calendar days with the appropriate academic dean of the college in which the academic department is housed upon the following grounds:

1. The student can demonstrate substantial procedural irregularities or inequities in the conduct of the hearing.
2. The student provides substantial new evidence that was not available at the time of the hearing that would have had a bearing on the outcome of the appeal.
3. The student is able to demonstrate that the Academic Appeals Committee's decision was erroneous or unfair.

In the absence of a written request for reconsideration of the committee's decision filed with the appropriate academic dean in the college wherein the appeal arose within the specified seven (7) day period, the committee's initial findings and action on the appeal filed shall be final.

#### **(VI) Reconsideration of the Academic Appeals Committee Determination**

Within seven (7) calendar days of the request for reconsideration, the academic dean of the college in which the grade appeal arose shall determine whether a compelling reason has been presented for setting aside the initial decision of the Academic Appeals Committee. If the dean finds that a compelling reason exists to take such action he or she may direct the committee to reconsider their findings and determination or take other appropriate action consistent with the guidelines. If the dean does not find a compelling reason to ask the Academic Appeals Committee to reconsider, the dean communicates with the student and this record will be maintained by the dean's office for three years.

Upon direction from the dean, the departmental Academic Appeals Committee shall have ten (10) calendar days to reconvene and reconsider their initial decision on the grade appeal. The committee in undertaking such review and reconsideration shall examine and take into account the concerns raised by the dean.

**The decision of the Grade Appeals Committee, following review and reconsideration, shall be final.**

## **Academic Standards and Policy on Probation, Continuing Probation, and Academic Dismissal Status**

Students admitted to the university are expected to maintain satisfactory academic standing, which requires a cumulative quality point average (QPA) of 2.0 (C) or better in their total program of courses and minimum 2.0 in the course work of their major areas of specialization.

The Registrar's Office reviews the academic progress of students at the end of each semester and places those students who fail to maintain a cumulative QPA of 2.0 or better on academic probation or dismissal. Students who do not meet the required quality point average may be granted one probationary semester in which to raise their average. Students who show academic progress, i.e., greater than a 2.0 semester QPA, may be continued on academic probation.

Any student who fails to meet the conditions of academic probation is subject to dismissal. A student whose adjusted cumulative average beyond the first semester falls below 1.7 or whose semester average is below a 1.0 is subject to immediate dismissal unless the overall QPA remains at 2.0 or above. A first-year student must pass at least 3 or more credits of the courses attempted during his or her first semester or he/she will be academically dismissed for a minimum of one academic year.

A student cannot be considered for readmission to the university for at least one calendar year following dismissal. A decision to readmit is made only when a student presents compelling evidence of some fundamental change which allows the student to perform academically at the level needed to graduate. Typically, this would include at least three transferable courses taken at another accredited institution of higher education, resulting in a grade point average of at least 2.5. Courses for which a student has received a D or F grade at Shippensburg can only be repeated at Shippensburg and any specific courses taken at another institution must have prior approval of the academic dean. If a

student has been dismissed twice for academic reasons, including when a dismissal appeal has been granted, he/she is ineligible for readmission to the university for at least five years, when he/she may be considered for academic forgiveness upon readmission.

## **Notice and Appeal**

If you are placed in one of these categories (probation or dismissal), you will be notified in writing and via email by the registrar's office. If you are academically dismissed you may appeal your dismissal by writing a letter to your academic dean by the date indicated in the letter from the registrar. Appeals should be accompanied by appropriate written documentation. All appeals will be considered by the Academic Review Committee.

## **Withdrawal and Leave of Absence**

If you decide to withdraw from the university, you must contact your academic dean. The dean's office will process your withdrawal and assist you if you intend to return to the university at a future date.

If you are in good standing with a cumulative QPA of 2.0 or better, you may apply to your academic dean for a leave of absence. This would permit you to return to Shippensburg University without having to apply for readmission. Leaves may be granted for up to one year.

When a leave of absence is granted, you must contact your academic dean before you return in order to schedule classes. If you do not return to the university within one year, you must apply for readmission.

## **Involuntary Withdrawal**

Occasionally a university physician and a licensed counseling psychologist determine a student has medical or psychological problems that make it impossible to function effectively in the university environment. The following involuntary withdrawal policy is necessary in those cases where a student in that condition refuses to voluntarily withdraw from the university.

In those cases where counseling or medical evaluation indicate it is necessary for a student to withdraw from Shippensburg University and the student refuses to withdraw voluntarily, an involuntary withdrawal may be imposed by the vice president for student affairs upon the recommendation of a university physician and a licensed counseling psychologist.

A copy of the involuntary withdrawal letter will be forwarded to the Registrar's Office and will become part of the student's official file. When evidence is presented to the director of health services and the director of counseling services that the health condition has been satisfactorily resolved, the student may seek readmission. The student may be readmitted after filing a formal application for readmission and upon recommendation of the director of counseling services and the director of health services.

## **Readmission of Students**

If you would like to return to the university and were not on an approved leave of absence or if you were dismissed or withdrew for academic reasons, you must file a formal application for readmission with the Registrar's Office. The application and fee must be submitted by one of the following dates: May 1 if requesting readmission for summer session; July 15 for the fall semester; November 1 for the winter term; or December 1 for the spring semester.

If you were in good standing at the time of your withdrawal, your application will be reviewed by your academic dean and other university officials, if necessary. Readmission may be denied or deferred if university enrollment is full or if you are applying for a program that is restricted or closed.

If you were dismissed or withdrew for academic reasons, you will not be considered for possible readmission for at least one calendar year following your dismissal or withdrawal. If a student has been dismissed twice for academic reasons, including when a dismissal appeal has been granted, he/she is ineligible for readmission to the university for at least five years, when he/she may be considered for academic forgiveness upon readmission.

Readmission is never guaranteed following academic dismissal. It may be granted only if you present compelling evidence of some fundamental change that will then allow you to perform academically at the level needed to graduate. Approval of the Academic Review Committee is required.

If you are readmitted within one year of leaving the university, you will be subject to the academic policies and requirements that were in effect at the time of your original matriculation date as defined at the beginning of this chapter. After one year, your academic dean may determine current policies and requirements (in whole or part) will be applied.

## **Academic Forgiveness**

Former Shippensburg University students may request the Academic Review Committee to consider them for academic forgiveness. If you have an unacceptable QPA for readmission and you have withdrawn from the university for at least five years, you may request your previous record not be calculated in your QPA for subsequent course work at Shippensburg.

Under academic forgiveness, previous course work at Shippensburg in which you received at least a C and which is appropriate in meeting current requirements will be treated as transfer credit. The grades will appear on your academic record, but they will not be calculated in your QPA. If you are approved for readmission under this program, you will be considered as newly matriculating; and you will be subject to all policies and requirements in effect at the time of your new matriculation.

## **Graduation Requirements and Majors**

As a fulfillment of its obligation to higher education, Shippensburg University has established high standards of achievement and promise for its students, which must be met without question before graduation is approved by the university's faculty or administration. Specific requirements relating to general education and individual majors may be found in the chapter, University Curricula. The university has established certain academic requirements for all students seeking a bachelor's degree.

## **Requirements for Graduation**

In order to graduate you must meet the following requirements:

- The completion of a minimum of 120 credit hours in the selected curriculum. Note: Developmental course work does not count towards the 120-credit minimum. If your program includes developmental course work, your degree program will require more than the 120-credit minimum.
- The completion of all general education courses and the course sequence requirements in effect in the selected curriculum
- A cumulative QPA of at least 2.0 (C average) for the total program of courses
- A QPA of at least 2.0 (C average) in the academic sequences or majors

- In the case of teacher education students, a satisfactory history of development in student teaching
- The resolution of all outstanding judicial and/or academic dishonesty matters
- Completion of all final course work

To receive a bachelor's degree you must complete a minimum of 30 credit hours of work at Shippensburg, where those 30 credits must be completed within your last 60 credit hours of work at Shippensburg. At least one half of all courses in your major field must be completed at Shippensburg except where program requirements dictate a higher percentage of courses in the major be completed here. Students in programs requiring off-campus instruction may be exempted from this requirement by the provost.

It is your responsibility to make certain all requirements for graduation have been met. An application for graduation must be filed with the Registrar's Office prior to the beginning of your final semester. Applications will be reviewed by your academic dean, and you will be notified if there are any problems.

Commencement ceremonies are generally held on the Saturday at the end of final examination week. Students who complete all graduation requirements during the fall or spring semester are expected to participate in the commencement ceremonies at the end of the semester in which they complete all requirements for graduation. Students who, at the completion of either the fall or spring semester, are within six credits of completing their degree requirements may petition their academic dean's office to participate in the preceding semester's commencement ceremony. Final approval is given by the Provost's Office. Approval will be granted when there is evidence that the student will be unable to attend the ceremony following completion of all requirements.

Students who complete all graduation requirements in the summer are expected to participate in the commencement ceremony at the end of the spring semester. Students who meet those requirements in the winter are expected to participate in the commencement ceremony at the end of the fall semester. Students who are completing their degree requirements at the end of the summer or winter may petition their academic dean's office to participate in the commencement ceremony immediately following the completion of their requirements. Final approval is given by the Provost's Office. Approval will be granted when there is evidence that the student will be unable to attend the ceremony directly preceding the completion of all requirements.

## Graduation Honors

Students with appropriate academic records may be graduated with one of the following distinctions. Such recognition becomes a permanent part of every graduating senior's record, with designation based upon the following cumulative QPA: *Cum Laude* (3.40 or better), *Magna Cum Laude* (3.60 or better), *Summa Cum Laude* (3.80 or better).

Graduation honors will be noted in the commencement program if you have attained the appropriate QPA at the time you apply for graduation. A list of students with honors is posted in the registrar's office for review. Honors posted on your permanent record will be based on your final cumulative QPA.

Transfer students who have earned at least 15 semester hours at Shippensburg University at the time they apply for graduation will be eligible for honors recognition in the commencement program. Transfer students who have earned at least 30 semester hours at Shippensburg University by the end of their program of study will be eligible for graduation honors to be posted on their permanent record.

## Major Field of Study

You may declare a major field of study during the admissions process or you may choose to remain undeclared and select a major at some point during your first three semesters at Shippensburg University.

In deciding on a major, you may receive personal and academic advisement and guidance from your faculty advisor and from your classroom professors who maintain regularly scheduled office hours for this purpose.

Each department chair arranges for the assignment of declared students to faculty advisors who will help students as they plan their academic programs. When you have declared a major field of study, your departmental academic advisor will review your academic record and assist you with the selection of a schedule of courses for each semester prior to registration.

## Selecting a Major

Many students select a major field of study prior to beginning their freshman year. If you have chosen not to declare a major prior to matriculating at the university, you are considered undeclared and you will be assigned an advisor by the dean of the School of Academic Programs and Services. This advisor will assist you in preparing an appropriate schedule of predominantly general education courses. These courses should be acceptable as general education background for any major you eventually select. Undeclared students are cautioned that any specialized courses they take which are not listed as general education may not be applicable in the major field eventually chosen.

If you are undeclared, you should select and declare a major program by the middle of your sophomore year. In some majors, such as those of the natural sciences and education, it is essential the declaration be made even earlier so as to allow adequate time to schedule the required courses to graduate in four years.

You should begin the selection process early. The more time you spend exploring majors and preparing for your career, the easier it will be to make the right choice. To help you select a major visit the Office of Undeclared Students website at [www.ship.edu/undeclared](http://www.ship.edu/undeclared).

You should be aware there is no assurance you will be able to declare any program you choose. Programs with limited capacity may be restricted or closed. The key to improving your ability to declare any major is your academic performance. If you earn good grades (a 3.0 or higher), you will have more and better choices.

## Make It Count

### Finish in Four

Your time and money are valuable. When you make every class and credit count to finish your Ship degree in four years instead of five or more, here's what you save or receive.

1. **Classes** - Make your classes count toward your degree. You've paid for it; don't waste it with a Withdrawal. Attend class, engage in discussion, and participate in your learning.
2. **Credits** - Take 15 credits a semester, 30 per year, to finish your degree on time in four years. Work with your academic advisor to develop a plan to take 15 credits per semester or 30 in a calendar year, and revise it every semester until you graduate.
3. **Money** - In-state students who finish their degree in four years instead of five save about \$20,000 and avoid additional school loan debt.
4. **Time** - When you finish in four instead of five you can start grad school or your career sooner... and you'll make your parents very happy.

## Changing Majors

Changing from one major into another major field of your choice is not automatic or guaranteed. The change is subject to the approval of the dean of the college in which the new or intended major is located following a review of your academic record prior to the request. All submitted requests for and processing of changes in declarations of majors and minors can take place at any time except during scheduling, which includes schedule clean-up, and the two weeks prior to scheduling (typically an eight to nine week period). A change of major is permitted only when you meet university and departmental qualifications for transfer and when no program enrollment restrictions apply.

To change from one college within the university to another you must meet certain conditions. You may not have any F grades in courses applicable to the new program. Your cumulative QPA must meet any requirements set by the new department and you must receive approval of the appropriate college dean.

You should also be aware if you have accumulated more than 60 credit hours, you may change from one division to another only if you have the agreement of all appropriate deans and you understand you might lose a significant number of credit hours which would not be appropriate for graduation in the new curriculum.

To be graduated from the university, any student changing majors must meet the requirements of the curriculum to which he or she is transferring.

## **Dual Degrees**

Dual degrees are earned when students enroll in programs that have different degree designations, such as a B.S. and a B.A. If you wish to simultaneously pursue two bachelor's degrees, you must consult with the dean and department chair of your primary program of study as to the procedure to be followed. Where such an option is available, students intending to opt for two degrees shall be required to take a minimum of 150 credit hours and complete the prescribed specified courses in each respective program of study.

## **Double Majors**

Double majors are earned when students enroll in programs that have the same degree designations, such as both programs are a B.S. or both programs are a B.A.

If you wish to pursue a second major, you must consult with the dean and department chair of your primary major as to the procedure to be followed. Students intending to opt for two majors shall be required to take a minimum of 120 credits and complete the prescribed specified courses in each respective major. Only one (three credit) course may be double counted toward both majors. Exceptions will be made for students majoring in the departments of biology, chemistry, computer science and engineering, economics, mathematics, and physics because of the large number of duplicate requirements in each of these fields. Double majors must share the same degree designation. Interdisciplinary majors declaring a second major in a related discipline may double-count a maximum of 12 credit hours between the requirements of their two majors. Courses fulfilling general education requirements of both majors may be double-counted without restriction.

## **Second Baccalaureate Degree**

It may be desirable for certain students, who already hold a baccalaureate degree, to obtain a second baccalaureate degree in a different or related field. Where such an option is available, you are expected to complete a minimum of 30 credit hours in courses not included in your original degree (usually these credit hours are in the new major) and any other requirements for the second degree, which cannot be equated to courses taken in the first degree program. To exercise this option you must be admitted through the Office of Admissions.

## **Minors**

An academic minor is an organized program of study that comprises the fundamental requirements of an academic major (core and cognate courses) equivalent to a minimum of 18 semester credit hours. As a secondary field of study, the academic minor should reflect a minimum of six credits of advanced standing coursework from the academic major. Exceptions to the advanced standing requirements may be granted on a case-by-case basis per request to the



chancellor. If you are interested in electing a minor, you should confer with the chair of your major department and the dean of your college. A full list of minors is available on the Programs of Study page.

It is possible to have more than one minor. Only six credit hours taken in one minor may be counted toward the fulfillment of another minor.

A minimum of a 2.0 QPA in the minor is the university requirement for the granting of a minor. At least 50 percent of the minor must consist of coursework completed at Shippensburg University.

## **Academic Requirements for Undergraduate Certificates**

Undergraduate Certificates awarded by Shippensburg University have the following common denominators:

- Must be a minimum of 9 credits
- Minimum required QPA for courses satisfying the requirements: 2.0
- Courses may not be taken on a satisfactory/unsatisfactory basis
- Half or more of the courses must be taken at Shippensburg University
- Only six credit hours taken for one Certificate may be counted toward another Certificate

## **Earning Academic Credits**

You may earn academic credits at Shippensburg University in several ways: by taking normal course work at the university, through the Advanced Placement Program, through credit by examination, and by taking courses at other accredited institutions for transfer back to Shippensburg University.

## **Registering for Classes**

The normal semester hour workload varies between 15 and 18 credit hours. Students with less than 12 credit hours are classified as part-time. To take more than 17 credit hours in a semester you must have approval of your academic dean. If you schedule 19 or more credits, you must pay an additional per credit fee (see section on Fees). Freshmen may not take more than 17 credit hours during their first semester.

Current students may register for classes at the university during the registration period held each semester for the next semester or during official schedule adjustment periods. New students (freshmen and transfers) will schedule their first semester classes at a special orientation session prior to the beginning of their first term.

If you have an outstanding obligation to the university, a hold may be placed on your account and you will not be permitted to schedule. Reasons for holds include but are not limited to: unpaid tuition or fees, health form not submitted, placement test not taken, unpaid library fines, parking fines, and final transcripts not submitted. You will be notified in writing about these obligations before a hold is placed. It is your responsibility to satisfy the obligation with the office that placed the hold before you will be allowed to schedule.

Even though you may be scheduled for classes, you must also meet all financial obligations by clearing your semester bill with full payment or by notifying the Student Accounts Office of any anticipated financial aid. If you do not pay or clear your bill by the stated deadline, your schedule of classes may be canceled.

## **Satisfying Your Bill**

It is the policy of Shippensburg University that students who fail to make appropriate, acceptable payment arrangements by the published deadline will have their semester schedule canceled.

When a schedule is canceled, the student may attempt to reschedule in the Registrar's Office, subject to space availability in the classes. Payment is required at the time of re-registration.

Students who have not registered and satisfied their bill for class(es) by the end of the W grade period will not receive any credit or grades for the course(s). Payment cannot be made and a grade retroactively assigned.

## **First Day Attendance**

If you are unable to attend the first class session of a course in which you plan to remain enrolled, you must give notice of your intended absence to the instructor, academic department secretary, or academic dean's office of that course. Failure to provide such notification may result in your name being removed from the roster by the instructor and your place in that class being given to another student. If you do not attend the first day of class, you cannot assume, however, that you have been dropped from this class. It is your responsibility to verify your enrollment status by checking your schedule on the myShip portal.

## **Class Attendance**

At Shippensburg University, your participation in class is viewed as essential to the teaching/learning process. Therefore, it is expected you will miss classes infrequently and only for good reason.

Each instructor shall state the course requirements including attendance expectations as part of the clearly written course information distributed at the beginning of each semester. An instructor must make provision for excused absences. However, if you elect to be absent from a class without being excused, you must be prepared to accept an evaluation for any graded activity, consistent with course requirements, which takes place at that session.

You will be held responsible for all material covered in classes. Only when an absence has been approved by the instructor, preferably in advance, will the instructor be expected to provide a makeup opportunity. Except under the most unusual circumstances, you are not permitted to make up a scheduled examination that has been missed.

## **Withdrawal from a Class**

Courses may be added or dropped without penalty or record notation during the official schedule adjustment period. The drop and add periods extend to the eighth calendar day in a typical semester, excluding holidays, to adjust schedules. Dates for this schedule adjustment period will be announced by the Registrar's Office.

You may withdraw from a class through the tenth week of the semester subject to the restrictions listed here. Requests for withdrawals may be initiated online during the spring and fall semesters by full-time undergraduate students who have attended the university at least one spring or fall semester previously and who have not applied for graduation. All other requests for withdrawals must be initiated through your academic dean. Following the initial schedule adjustment period, any courses from which you withdraw will remain on your academic record and will be assigned a grade of W. You may not withdraw from a course in which you have been accused of or found guilty of academic dishonesty and have been assigned the penalty of an F grade for the course, according to the Academic Dishonesty policy.

You should be aware that if you drop or withdraw from the following courses, you may not be able to register for them in future semesters without permission: ENG 050 Basic Writing, ENG 114 Writing Intensive First-Year Seminar, ENG 113 Introduction to Academic Writing, ENG 115 Advanced Placement Writing, MAT 050 Developmental Mathematics, RDG 050 Developmental Reading and Study Skills, HCS 100 Introduction to Human Communication, HIS 105 Historical Foundation of Global Cultures, and HIS 106 Thinking Historically in a Global Age. The skills

learned in these courses are essential for successful progression through your academic degree and therefore you need to take these during your first year at Shippensburg.

You should carefully consider the ramifications before you withdraw from a course. Course withdrawal may delay your graduation and increase your costs by preventing you from accumulating the necessary number of credits or by disrupting the timing of a required sequence of courses in your major. If withdrawing from a course causes you to drop below 12 credit hours for the semester, you will be considered a part-time student, which may jeopardize financial aid, athletic eligibility, health insurance, and residence hall status. You should consult with your academic advisor, department chair, or dean before you withdraw from any course after the initial schedule adjustment period.

Should you withdraw from any class, it is your responsibility to do so officially, whether or not you have ever attended that class. If you do not attend and do not withdraw, your name will remain on the class roll until the final grading period and you will receive a grade of F for the course.

You may be allowed to withdraw from all your classes with grades of W after the normal withdrawal period if you provide your academic dean with clear medical evidence you are unable to continue your course work. It will be the determination of the dean whether this evidence is substantial enough to merit a medical withdrawal. Notification of a medical withdrawal must be received by the academic dean prior to the end of the current semester. Medical withdrawals are not permitted after the semester ends. If you receive a medical withdrawal, you will be eligible for a refund only if your withdrawal occurs within the time period normally allowed for refunds.

## **Repeated Courses**

Students may avail themselves of the repeat/grade replacement option a total of six times. However, the most recent grade of the course will be used in the QPA calculation, regardless of whether that grade is higher or lower.

Students may repeat any course taken previously, no matter what letter grade was initially earned, and the most recent grade will replace the previous grade. Grade replacement of a repeated course is not limited to courses in which D and F grades were originally earned. If you repeat a passed course and fail, you will lose both the quality points and the credits you had previously earned.

A single course repeat for grade improvement will be limited to two times. The six repeats may include repeating six courses one time each, repeating three single courses two times each, or any combination which adds up to six instances where a single course is not repeated more than two times. After the sixth repeat instance, any additional course repeats will include both the previous and new grade in the QPA calculation.

Prior to any student athlete and/or any student with financial aid utilizing the repeat option, the student should ensure it will not jeopardize their status as a student athlete or their ability to receive financial aid.

A previously failed course may not be repeated through an online course.

A D or F grade earned at Shippensburg University may not be made up or replaced by credits earned at another institution of higher learning for the same course.

## **Online Courses**

Undergraduate students must have a minimum of 12 credits and a 2.0 QPA prior to registering for an online course. A previously failed course (grade of F) may not be repeated through an online course. Students can schedule no more than 11 credits in online and/or face-to-face format per summer term. Students can schedule no more than 8 credits in online and/or face-to-face for the winter term.

## **Transfer Credits**

If you wish to do work at another college or university for transfer credit back to Shippensburg University, you must first obtain approval of your academic dean. In order for transfer credit to be posted to your academic record, you must have an official transcript of the work sent to your dean for final review and approval. In general, a grade of C or better is required for transfer credit to be accepted. The transfer credit will appear on your transcript with a grade of TR and will not be used in calculating your QPA. Transfer credit will not be awarded to replace a D or F grade earned at Shippensburg University.

## Advanced Placement Program

The university participates in the College Entrance Examination Board's Advanced Placement Program. Under this program, consideration is given to advanced credit and placement for those able and ambitious students admitted to the university who participate in this program in high school and who take the Advanced Placement Program Examinations.

The Advanced Placement Program, administered by the College Entrance Examination Board, is designed for all high school students who are about to enter college and who wish to demonstrate their readiness for courses more advanced than those most frequently studied in the freshman year.

Advanced classes are offered in many high schools in one or more of the following subjects: French, Latin, German, Spanish, English literature, English composition, American history, European history, chemistry, physics, and mathematics.

A national examination in each subject is administered in May by the Educational Testing Service, which is designed to test the competence of the student relative to the point at which college study could begin in that subject. The score required for credit and/or advanced placement is determined by the department chair along with the appropriate dean. Scores of 3, 4, or 5 generally will earn college credit.

## College-Level Examination Program

The College-Level Examination Program (CLEP), administered by the College Entrance Examination Board, is utilized by the university primarily to evaluate nontraditional college-level education for the purpose of granting credit and placement. *This will apply particularly to adults who have acquired their knowledge and understanding through independent study, work experience, service schools, or from university courses taken years before.* The amount of credit and the score required for granting credit is determined by the appropriate dean. You may earn up to 30 credits through CLEP Examinations. Contact the Admissions Office for additional information regarding the test.

## International Baccalaureate Program

The International Baccalaureate (IB) Program is an internationally recognized curriculum that offers 11th and 12th grade students an opportunity to earn the IB diploma. The IB diploma is a passport to higher education. The program is offered in over 800 public and private secondary schools in more than 100 countries around the world. To earn the diploma, students complete and test in six subjects; write an extended essay of independent research guided by a faculty mentor, complete 150 hours of creative, action, and service activities (CAS); and participate in a critical thinking course called Theory of Knowledge. This advanced, comprehensive program of study offers an integrated approach to learning across the disciplines with an emphasis on meeting the challenges of living and working in a global, technological society. Students who take IB courses without completing the entire program may earn IB certificates by testing in selected IB courses.

Shippensburg University recognizes the IB Diploma as well as IB Certificates.

## Credit by Examination

If you are in good academic standing, you are entitled to request from your dean the opportunity to take a comprehensive examination in a particular course offered at the university if there is reasonable evidence you have covered essentially the same materials before in other classes or from private study and experience. The Credit by Examination form is available in the Registrar's Office. The \$80 administrative fee must be paid before the exam is administered. If you make satisfactory scores on the examination, you will receive full credit-hour credit toward meeting graduation requirements. The courses will be listed on your transcript with the symbol T in the semester in which the credits were awarded through examination.

Students with advanced high school courses recognized by the university are invited to request from the chair of the department in which the course is offered the opportunity to take examinations in the areas of special preparation.

## Credit in Performance Areas

It is possible to earn academic credit through participation in certain musical performance areas. These include Brass Ensemble, Concert Band, Concert Choir, Women's Chorale, Inspirational Chorale, Jazz Ensemble, Madrigals, Marching Band, Orchestra, and Woodwind Ensemble. Students participating in these areas must schedule the appropriate course through the music department. All grades received in these courses will be included in your cumulative QPA; however, a maximum of three credits earned in performance areas can be counted towards graduation.

## Requesting Transcripts

Shippensburg University has retained Credentials Inc. to accept transcript orders over the Internet. This option allows you to submit transcript requests 24 hours a day, 7 days a week.

Credentials Inc. has been appointed as the designated agent for processing and sending official electronic transcripts on behalf of Shippensburg University. This option is available to anyone attending Shippensburg University in 1992 or later. The PDF transcript that is produced using this service contains the identical information as the printed transcript and can be certified as unaltered by uploading the file to the company's website that is provided during the delivery process. Credentials Inc. has been granted the authority to deliver all such electronic transcript requests on behalf of Shippensburg University and respond to any inquiries regarding the transactions.

Requests for electronic transcripts cost \$8 per individual transcript. Requests for paper transcripts cost \$10 per individual transcript. Paper transcripts will be mailed within three (3) business days. Additional fees will be incurred if same business day or international mailing is required. All fees are outlined at the Credentials Inc. order site and will be summarized prior to your submission of your request.

Please click on the appropriate link below to enter your order.

- [Order Transcripts Online - Current Students \(with University ID and Password REQUIRED\)](#)
- [Order Transcripts Online - Alumni and Former Students \(without University ID and Password\)](#)

If you are uncomfortable placing an order over the Internet, you can call Credentials Inc. at 847-716-3005 to place your transcript request. There is an additional operator surcharge for placing orders over the telephone.

If you have placed an order through TranscriptsPlus, you may check the status of your order by navigating to the Credential's Self-ServicePlus screen.

[Click here to check the status of your order.](#)

Questions regarding this process should be directed to the Registrar's Office, located in Old Main 111. To contact the office call (717) 477-1381.

## **Academic Options**

In addition to its regular academic programs, Shippensburg University provides a variety of academic options to interested and qualified students. These include independent study, internships and field experiences, the Honors Program, foreign study, graduate course work, and cooperative arrangements with other institutions.

### **Independent Study**

Shippensburg University affords opportunity to deserving and capable students to engage in independent study related to their major field, a supporting area, or specialized interest. This program is highly individualized, related entirely to the student's preparation and interest, and the overall appropriateness of study as judged by the department and college dean.

Independent study must include some new experience of inquiry, evaluation, and/or creative activity. This experience must be one that is not available through an established course, including a course by appointment.

To be selected and approved for an independent study project you should have a cumulative QPA of at least 2.50. The faculty member you would like to work with must agree to oversee your project. You will also need approval from your department chair and academic dean as well as the faculty member's chair and dean. Final approval is required from the provost and senior vice president for academic affairs. You must register for the independent study project in the semester for which it is approved. The independent study must be accepted as a part of your student course load (not to exceed 18 credits per semester at the undergraduate level).

The acceptance of independent study students shall be voluntary on the part of the faculty member; however, when such students are accepted, at least five hours of faculty time per credit offered shall be made available upon request of each student. This time shall be outside the periods already allocated by the faculty member to classroom and office commitments.

In some unusual cases it is possible for independent study to span several semesters if the department chair(s) and college dean(s) are convinced of the need. A special designation by the dean will indicate approval for continuation of the independent study. A grade will be given during the semester of its completion only. At the time a grade is given, there should be a one-page written record of the completion and the evaluation of the independent study project prepared and signed by both the student and the faculty member. A copy should be placed in the college dean's office and, if desired, in the department office.

An independent study course may not be used to repeat or replace a course in which a grade of D or F was earned.

### **Individualized Instruction**

In some cases, you may be able to earn credit for a course during a semester in which the course is not offered. If a faculty member is willing to work with you on an individual basis, you may apply for individualized instruction. These courses are generally restricted to students who have completed a substantial portion of their degree program and who need the particular course to complete their degree requirements.

Application forms for individualized instruction are available in your academic department or dean's office. Your course must be agreed to by the faculty member you would like to work with and then approved by your advisor or department chair as well as the faculty member's chair and dean. Final approval is required from the Provost's Office.

Individualized instruction may not be used to repeat or replace a course in which a grade of D or F was earned.

## **Internships**

Experiential learning in the form of internships and field experiences is available to students in many areas of study. You should contact your academic advisor or department chair for information regarding these academic opportunities. When the department chair in your major approves an internship, you must schedule the appropriate number of credit hours and pay all course fees.

## **The Harrisburg Internship Semester (THIS)**

During the fall and spring semesters, the university selects an undergraduate student to participate in The Harrisburg Internship Semester (THIS), sponsored by the Pennsylvania State System of Higher Education and administered by the Dixon University Center in Harrisburg. Students selected are placed with policy makers in state government offices and agencies. Each THIS intern earns 15 credits: 9 credits for the internship, 3 credits for a research project, and 3 credits for participating in an academic seminar. A stipend is involved.

To be eligible to apply, a student must have a 3.0 QPA and must have completed at least 45 credit hours. THIS is open to students from all majors. To apply contact the Provost's Office for the name of the THIS campus coordinator.

## **The Washington Center Internship Semester**

Shippensburg University has a relationship with The Washington Center for Internships and Academic Seminars, an organization that provides quality internship experiences and academic seminars for credit, either in the regular term or during the summer. Participating students get 12-15 credits for both the internship and the course, which is transferred back in either a student's program or as an elective. Internships are available for virtually every major with over 4,000 companies, agencies, and organizations-federal, private, and non-profit.

The Washington Center has a new home. Its new Residential and Academic Facility is located near Union Station in northwest Washington, D.C., close to metro stations in the heart of the city. Students live in state-of-the art apartments with classroom space in the same building, along with a fitness center, computer lab, and common space. Each student has a program advisor who assists in setting up the internship placement and who monitors progress, career goals, and professional development.

Acceptance to the program is somewhat selective, and the application process requires letters of recommendation, an essay, and transcripts as well as the endorsement of the campus liaison. Students can read more about the program at <http://www.twc.edu>, or contact the Associate Dean of Arts and Sciences, the campus liaison for The Washington Center.

## **Honors Program**

The Honors Program is dedicated to promoting scholarship, leadership, and service. The program is designed for academically motivated students who thrive in an atmosphere of creative learning and intellectual exploration. The University Honors Program involves students in every major at every class level. Honors courses at Shippensburg University are distinguished by their high levels of energy, participation, motivation, and expectations. They focus on innovative active-learning strategies, including discussions, debates, and simulations, that provide appropriate academic challenges for motivated, high-ability students.

The Honors Program provides numerous opportunities for students to enrich their undergraduate education by participating in study abroad programs, undergraduate research projects, and internships. Honors students are eligible to apply for the Honors Program study abroad scholarship, and they can earn Honors credits for their study abroad experiences. Each year, two Honors students are awarded full scholarships to participate in the Pennsylvania State System of Higher Education Summer Honors Program, which is held in diverse locations around the world, including France, Costa Rica, and South Africa. Honors students are also eligible to apply for Honors and university grants to support their undergraduate research projects.

The Honors Program not only helps students achieve their academic potential, but it also encourages their involvement in significant leadership and service opportunities. All Honors students are members of the Honors Student Organization (HSO). The HSO's officers and committee chairs organize service projects, recreational events, and cultural activities for Honors students. The Shippensburg University Honors Program is an active member of the National Collegiate Honors Council (NCHC), the national organization for Honors Programs, and Shippensburg University Honors students regularly attend and make presentations at the annual NCHC conferences.

To earn the University Honors Program designation, students who enter the Honors Program as first-semester freshmen must complete at least 36 Honors credits, including 24 credits of Honors general education courses, 9 credits of upper-division Honors coursework, and a 3-credit Honors capstone project. The curricular requirements for students who enter the Honors Program after the first semester of their freshman year are prorated based on consultation with the Honors director. Students must also maintain a 3.25 QPA overall and in their Honors courses and fulfill the program's participation requirement.

Additional information about the Honors Program, including the program application and back issues of the program newsletter, *The Honors Chronicle*, are available on the Honors Program website at [www.ship.edu/honors](http://www.ship.edu/honors).

## Study Abroad

Shippensburg University encourages students in all majors to consider the value of a semester or year studying in a foreign country. The Study Abroad Program is designed to assist students in deciding if foreign study is appropriate and then help them to select a country, choose a program, complete the application process, and support them while they are abroad. The university has educational agreements with universities in the United Kingdom, Canada, Denmark, and other countries. Our membership in the Pennsylvania State System of Higher Education International Studies Consortium enables our students to study abroad in each member's programs. We also have access to more than 4,500 other international programs. These experiences enable students to gain cultural knowledge and social skills that enhance their opportunities for advanced study and careers.

Courses taken by students who study in an institutionally approved Shippensburg University study abroad program will be counted toward residency requirements. Grades equivalent to C or above will appear as TR on the academic record. Grades equivalent to D or F will not earn transfer credit.

For further information about the Study Abroad program, contact the Center for Global Education, Ceddia Union Building, or call 717-477-1279.

## Taking Graduate Courses

If you are a senior in good academic standing with a cumulative QPA of 3.0 or higher, you will be permitted to register for graduate courses with the written approval of your advisor, your department chair, your college dean, and the dean of Graduate Studies. This process is initiated by your major department. You may enroll for only one graduate course at each registration period for a maximum of nine graduate credits over a 12-month period.

If the graduate level course you take is to be used in meeting the baccalaureate degree requirements, it will be entered only on your undergraduate record. It will not be entered on the graduate record.



## **Earning Graduate Credit**

If you are a senior in good academic standing who qualifies for admission to graduate study and you do not need to carry a full load of undergraduate courses in your final semester to complete the requirements for the bachelor's degree, it is possible to take courses for graduate credit. You may register in the final semester for up to two graduate courses for which you receive graduate credit and which may be counted toward a master's degree. To register for graduate courses, you must have the approval of your department chair, the appropriate academic dean, and the dean of Graduate Studies.

When you are approved to register for a graduate class, you will complete a formal application for non-degree admission to graduate study in the Registrar's Office. You will not be charged an application fee. If you wish to take graduate work at Shippensburg after completing the bachelor's degree, you will then be required to pay the application fee when you apply to a master's degree program.

Full-time undergraduate seniors taking graduate courses within the 12-18 semester credit hour range pay the full-time undergraduate tuition rate; undergraduate seniors taking graduate courses beyond 18 semester credit hours pay additional undergraduate course fees for each credit over 18.

Undergraduate part-time seniors taking a mix of undergraduate and graduate courses pay at the undergraduate rate for any combination of courses short of a total 12 semester credit hours.

Undergraduate seniors who are permitted to register for a graduate class in any of the summer sessions pay at the undergraduate rate.

## **Cooperative Agreement with Wilson College**

Through a cooperative agreement Wilson College and Shippensburg University students may schedule courses on each other's campus. Wilson College students may schedule courses at Shippensburg, and Shippensburg University students may schedule courses at Wilson. The course credit will not be treated as transfer credit. Course work will appear on the student's official record along with the grade earned. Students will register and pay tuition at the institution at which they have been matriculated.

A list of courses being offered at each institution will be available. To schedule one of these courses you will need to have the approval of your major department and your academic dean. Once this permission is obtained, you will schedule the course through the Registrar's Office at your home institution. Attendance will also have to be approved by the other institution through appropriate procedures. Most course offerings at each institution will be open to those students at the other institution who have the necessary prerequisites for entry into a course. However, you may not schedule at the alternate institution a course available on your own campus. Your course load, including the course scheduled at the other institution, should not exceed the maximum for your home institution.

## **Visiting Student Program**

Students at Shippensburg University have the option of taking courses at one of the thirteen other schools in Pennsylvania's State System of Higher Education. Under the Visiting Student Program, courses you take will be recorded on your academic record at Shippensburg and the grades you receive will be included in your QPA calculation. This program is intended to allow you to take advantage of courses available across the State System, without loss of institutional residency, eligibility for honors or athletics, or credits toward graduation at the home institution.

To participate in the Visiting Student Program you must have completed at least 12 credits and be in good academic standing. Students may take a maximum of 24 credits via the Visiting Student Policy. Advance approval is required

from your academic dean. This program may not be used to repeat any D or F grades earned at Shippensburg University.

## Academic Dishonesty

It is the policy of Shippensburg University to expect academic honesty. Students who commit breaches of academic honesty will be subject to the various sanctions outlined in this section. This policy applies to all students enrolled at Shippensburg during and after their time of enrollment.

### Definition

As used in this policy, the term academic dishonesty means deceit or misrepresentation in attempting (successfully or unsuccessfully) to influence the grading process or to obtain academic credit by a means that is not authorized by the course instructor or university policy. A breach of academic honesty is committed by students who give, as well as receive, unauthorized assistance in course and laboratory work and/or who purposefully evade or assist other students in evading, the university's policy against academic dishonesty.

- Academic dishonesty includes but is not limited to:
- Bribing or attempting to bribe, faculty or staff personnel in order to attain an unfair academic advantage.
- Possessing course examination materials prior to administration of the examination by the instructor without the instructor's consent.
- Using unauthorized materials or devices such as crib notes during an examination.
- Providing and/or receiving unauthorized assistance during an examination.
- Using a substitute to take an examination or course.
- Misusing transcripts, records or identification, such as forgery or alteration of transcripts.
- Allowing others to conduct research for you or prepare your work without advance authorization from the instructor, including, but not limited to, the services of commercial term paper companies.
- Plagiarism, as the term is defined in the section Plagiarism.
- Intentionally and without authorization falsifying or inventing any information or citation in an academic exercise, such as making up data in an experiment or observation.

The preceding list is only for purposes of illustration. Other forms of inappropriate conduct may also be subject to charges of academic dishonesty.

### Resolution of Charges

When an instance of academic dishonesty is alleged, the issue should be resolved on an informal basis between the student and faculty member. If an informal resolution cannot be achieved, a formal process of deciding culpability and assessing sanctions will be followed. If the student has committed a previous violation, the formal process must be followed.

### Informal Resolution

A faculty member who obtains information a student has been dishonest should act promptly to resolve the issue. The faculty member should first contact the dean of students to determine if this is the first violation for the student. If the suspected incident is **not** the first violation, the offense must be handled through the formal resolution process.

For a first violation, the faculty member may attempt to resolve the issue informally with the maximum penalty to be a grade of F in the course. If the faculty member feels the offense warrants a more severe penalty, the matter must be resolved through the formal process.

For the matter to be resolved informally, the faculty member must meet with the student and present any evidence of a violation. The student will be given an opportunity to provide an explanation after hearing the evidence. If the faculty member determines a violation has occurred, he/she will complete the Settlement of a Charge of Academic Dishonesty form. This form will include the penalty the faculty member will apply.

The form is then given to the student, who has 72 hours to seek advice and decide whether to sign. If the student agrees to accept the penalty, he/she must sign in the presence of the faculty member. The faculty member will then implement the accepted penalty and forward the settlement form to the dean of students. The form will be kept on record for five years and may be used if the student is accused of another academic dishonesty offense or any other violation of the Student Code of Conduct. The information will only be used for internal purposes and will not be disclosed outside the university.

If the student refuses to sign, the faculty member may pursue the matter through the formal resolution process.

## Formal Resolution

An allegation of academic dishonesty must be resolved through a formal process if the student disputes the charges or does not accept the penalty proposed by the faculty member. The formal process must also be followed if the incident is **not** the student's first violation.

In the formal process, an allegation of academic dishonesty will be treated as a violation of the Student Code of Conduct. The charges will be resolved through the judicial process administered by the dean of students. The faculty member initiates a written complaint by providing details of the incident to the dean of students. The dean of students and an academic administrator designated by the provost will consult to determine if sufficient information is present to warrant further action.

If there is sufficient information to proceed with the complaint, the steps outlined in the Student Code of Conduct and Judicial Process section of the student handbook *Swatanev* will be followed. Academic dishonesty cases must be heard by the university judicial hearing board; the judicial officer option is not available for these cases. Appeals of academic dishonesty decisions will be handled by the vice president for student affairs and the provost.

## Penalties

The Student Code of Conduct contains a list of sanctions that may be imposed for violations. In addition to those in the Code of Conduct, the following two sanctions may be imposed against students found to have committed acts of academic dishonesty:

*Grade Reduction.* The grade for a particular unit of work or for the entire course may be reduced.

*Imposition of a Failing (F) Grade.* The student may receive an F grade for the course.

These two penalties may be imposed through the informal settlement process or the formal hearing process. More severe penalties, including suspension or expulsion, may only be imposed through the formal process. Additional stipulations may also be attached to any sanctions.

## Plagiarism

Plagiarism is a form of academic dishonesty. Shippensburg University will not tolerate plagiarism and the faculty will make all reasonable efforts to discourage it.

Plagiarism is your unacknowledged use of another writer's own words or specific facts or propositions or materials in your own writing. When other writers' words or materials (even short phrases or specific terminology) are used, you should put these words, phrases, or sentences inside quotation marks (or else indent and single-space more extended quotations) and you should then cite the source of the quotation either in the text of your writing or in footnotes. Failure to do so may be considered plagiarism. When the propositions of another writer are restated in your own words (paraphrased), you should also indicate the source of the paraphrased material in your own text or in footnotes. Comparable citation should be made for borrowings from media other than printed texts, such as lectures, interviews, broadcast information, or computer programs.

The more flagrant form of plagiarism is your submission of an entire paper or computer program or lab report (or a substantial portion of a longer work) written by someone else and presented as your own work. This can include material obtained from a friend, from a fraternity or sorority file, from duplicated student writings used for analysis in other writing courses, from commercial sources, or from published materials. Another common form of plagiarism is the unacknowledged borrowing from other sources (either words or propositions) and the integration of such material in your own work.

Certain situations may cause conscientious students to fear plagiarizing when they are not really plagiarizing. These include:

- *Improper format for documentation.* Improper documentation is not plagiarism but a technical academic problem. Different professors, different academic departments, and different academic disciplines have various ways of documenting borrowed materials. Each professor should make clear to you how he/she wants borrowed materials documented for given writing or programming assignments. You should make every effort to understand precisely what your professor expects regarding documentation. As long as you make a clear effort to document all borrowed materials, you are not plagiarizing.
- *Use of supplemental individualized instruction on an assignment.* Various tutorial resources are available at the university, including a writing center and assistance from faculty who assist students during the process of composing a paper. When you seek these kinds of legitimate academic assistance, you are not plagiarizing. In fact, you are making an extraordinary attempt to improve your writing and academic performance. In such cases, you should inform your instructor of the fact you have sought assistance from a given source on an assignment. This acknowledgment should be stated on the cover sheet of your paper or program. The prohibition against plagiarism should in no way inhibit or discourage you from seeking legitimate supplemental instruction in developing an assignment.
- *Use of a proofreader.* If you are unsure of your ability to produce finished drafts that are virtually error-free, you may use such resources as hired typists, more editorially proficient friends, tutors, or writing center personnel to insure your finished papers are relatively error-free. You should indicate on the title page the fact your paper was typed and/or proofread by someone else. The prohibition against plagiarism should in no way inhibit or discourage you from using available reference and/or human editorial resources in seeking to produce an error-free final copy of a paper.

In summary, plagiarism is the unacknowledged borrowing of another writer's, speaker's or programmer's words and/or propositions. To avoid plagiarism, you should acknowledge assistance received in developing and/or proofreading a paper. If you need or desire such assistance, you should not be discouraged from seeking it because of the university policy on plagiarism.

## **Elnetta G. Jones School of Academic and Exploratory Programs**

The Elnetta G. Jones School of Academic and Exploratory Programs supports collaboratively the mission and goals of Shippensburg University by providing quality academic support services to the campus community that aid student

transition to college; encourage and support the potential for learning and personal development; enhance student academic success; and support persistence to graduation. All programs offered by the offices within the school are committed to helping students reach their full academic potential. We respect and appreciate the diversity of our students and embrace the changing needs of the university within an evolving global community. For further details, visit [www.ship.edu/aps](http://www.ship.edu/aps).

## Office for Exploratory Studies

If you do not declare a major at the time you are admitted, you will be enrolled as an exploratory student, and the Office for Exploratory Studies, within the Elnetta G. Jones School of Academic and Exploratory Programs, will serve as your academic home until you declare a major. The office provides exploratory students with a wide variety of academic support services so they can make normal progress toward a degree while exploring educational and career options. (Unlike the three undergraduate colleges, the Office for Exploratory Studies does not grant degrees.) By the middle of their sophomore year, exploratory students are required to have in place a plan to declare a major. The Dean of Academic and Exploratory Programs is the academic dean for all exploratory students.

Services provided by the Office for Exploratory Studies include an academic orientation to the university, assistance in understanding the university's policies and procedures, and an administrative unit for your academic records. However, probably the most important service and resource provided is your faculty academic advisor. You will be assigned an advisor before you arrive at Shippensburg University and will be expected to meet with him or her at least twice during the semester. Your advisor might wish to see you more frequently if he or she believes additional support will enhance your academic success. Your academic advisor will be your primary resource for assistance with selection of appropriate courses, registration information, and other important academic advice and information, particularly with regard to your selection of a major. He or she will also direct you to other appropriate support resources should you need them. We consider your relationship with your academic advisor an integral part of your successful experience as an exploratory student at Shippensburg University.

## Developmental Education

Shippensburg University is committed to creating a responsive learning environment in which all students can develop the skills and attitudes necessary for the attainment of academic, career, and life goals. Developmental education is a process to assist students in overcoming individual barriers to academic success. This process includes

- Ensuring proper placement in writing, reading, and mathematics by assessing each learner's level of preparedness for college-level coursework; and
- Providing developmental courses for students who need to improve their academic foundation for success in college-level studies.

Developmental courses are offered in writing, mathematics, and reading. These courses provide opportunities for students to develop academic proficiencies necessary for college success. A grade of C or better is required in developmental-level courses; students earning a D or F will need to repeat the course in the following semester.

Credits earned in courses numbered 050 taken at Shippensburg are included in determining a student's class standing, and the grades are computed in the student's quality grade point average; however, these credits do not count toward the total number of credits required for graduation.

Students who earn placement into a developmental-level course are strongly encouraged to contact the Testing Center for options to satisfy the placement before entering Shippensburg University.

# Learning Center

The Learning Center, located on the first floor of the Ezra Lehman Memorial Library, is the university's primary site for tutoring services and academic support. Within the center, students are able to select from an array of options that can help them improve their academic performance, writing proficiency, and learning abilities. Outside the center, students can peruse the Learning Center's website at <http://learning.ship.edu/home> to obtain information on tutoring options, view virtual workshops, find schedules for face-to-face workshops, access writing and study skills resources, and learn how to schedule an appointment with a tutor or a Learning Specialist. The Learning Center works with the faculty and student affairs offices to provide services and programs that enhance the learning experiences of students.

## Tutoring Services

Content tutoring is available in most general education courses and a number of upper-level disciplinary courses. Free one-on-one tutoring, small group tutoring, and drop-in tutoring is provided through peer tutors and graduate assistants who are carefully trained, and regularly evaluated. Students seeking tutoring sessions can schedule an appointment or simply stop by the Learning Center to see if a tutor is available on a walk-in basis. For students who enjoy studying in a collaborative environment, small group tutoring offers students the chance to meet in study groups where a tutor helps explain problem areas and guides the direction of the group. Students who desire flexibility and a casual tutoring environment will enjoy the drop-in tutoring option where they can choose to meet with a tutor or small group for as little as a few minutes or up to a few hours. The many options for tutoring provide students with choices to fit their learning styles and academic needs.

The Learning Center also offers individual appointments, workshops, and resources for helping students improve their writing or address writing concerns. Students can schedule an individual appointment with a trained writing tutor where they can discuss their work-in-progress and enhance their writing abilities. Through the Learning Center's website, students can also view on-line writing workshops, learn about interactive workshops available at the center, and access writing resources to help them throughout the writing process. Students will find that talking with a writing tutor can help them strengthen their writing skills and improve the quality of their writing assignments.

## Learning Specialists

Professional learning specialists are available to help students develop effective learning strategies and reach their academic goals. Learning specialists are equipped to help students improve their study and testing habits and learn how to manage their time, test anxiety, and stress. Not only can a learning specialist serve as a mentor to students experiencing difficulties in their academic skills, but learning specialists can also successfully help students on probation improve their academic standing. Learning specialists meet with students on a one-to-one basis, and students should schedule an appointment to meet with a Learning Specialist.

## Academic Improvement Plan

The Academic Improvement Plan (AIM) assists students on academic probation in developing strategies and skills that will help them to improve their cumulative grade point average. Learning specialists guide students in the AIM program to help them experience success in college. This structured program is designed to give students skills in studying, self-management, emotional intelligence, and personal responsibility, all of which can help them to improve their academic standing and achieve success in their courses.

The Learning Center staff endeavors to be a central resource for all learners in the university community. To learn more about the resources and services provided by the Learning Center, call (717) 477-1420 or visit the center's website at [www.ship.edu/learning/](http://www.ship.edu/learning/).

# Academic Success Program/ACT 101

The Academic Success Program (ASP) provides access and academic support to students who do not meet the regular admission criteria to Shippensburg University but who have demonstrated the potential, desire, and motivation to succeed in college. The ACT 101 component of ASP is Pennsylvania legislation that provides educational funding support to qualified students seeking admission to the institutions of higher learning in Pennsylvania.

As part of the Elnetta G. Jones School of Academic and Exploratory Programs, ASP's goals are to promote academic success and to build self-confidence with guided supportive services throughout our students' college experience.

## Summer Bridge Program

The Summer Bridge program is a mandatory five-week program. The focus of the program is to provide a realistic orientation to the roles and expectations of Shippensburg University students. Upon successful completion of this required experience, students are considered for admission to Shippensburg for the fall semester.

The Summer Bridge Program provides:

- An extensive orientation to college life
- An assessment of academic strengths and areas needing improvement
- An opportunity to develop academic skills in reading and writing
- An opportunity to explore and improve attitudes and expectations about the nature of college-level work

Summer Bridge students will:

- *Enroll in Introduction to Higher Education (ASP 101):* This three-credit course is designed to provide students with an orientation to academic and social expectations of higher education. Topics include study skills; skill development in reading, writing and critical thinking; leadership skills; career exploration; community awareness; and service-learning.
- Enroll in a second three-credit course, taught by university faculty, that is paired with ASP 101.
- Participate in workshops, seminars, and selected activities
- Participate in individual and small group meetings with program faculty and staff members
- Attend campus and community cultural events and activities

*Note: The cost of tuition and room and board is waived to those students who meet all of the ACT 101 State Guidelines, but all students are required to pay for textbooks at the beginning of the summer program.*

## Academic Year Support Program

The Academic Year Support Program is designed to further develop the overall preparedness of the ASP students who have successfully completed the Summer Bridge program. ASP counselors closely monitor assigned students to ensure they are on track and focused on academic and personal success. Counselors emphasize helping students build on the base of knowledge established during the summer program.

The following are components of the Academic Year Support Program:

- Academic advising: Students learn to understand policies and procedures and general education and major requirements.

- Career counseling: Career assessments assist students in evaluating their academic skills as they relate to choosing academic majors and possible careers.
- Financial aid advising: Students learn about financial aid and other monetary obligations related to their educational goals.
- Personal and social adjustment counseling: Advisors support students throughout their years at Shippensburg in the areas of personal and social adjustment as they relate to academic success.

## Testing Center

The Testing Center administers placement tests to students under the auspices of the Elnetta G. Jones School of Academic and Exploratory Programs. Details regarding the placement testing program are available under the General Education section of this catalog and through the placement testing website at [www.ship.edu/testing](http://www.ship.edu/testing).

## Student Matters

Full-time students at Shippensburg University spend an average of 16 hours each week attending classes. It is evident, then, the individual student determines to a large extent how much will be gained from an education at Shippensburg. The university makes every effort to provide an environment of curricular and extracurricular activities to enhance student life.

## University Housing

Shippensburg University provides accommodations for approximately 2,200 registered full-time degree-seeking students in eight residence facilities. The university offers six suite-style residence halls: Kieffer Hall, Lackhove Hall, McCune Hall, Naugle Hall, Presidents Hall, and Seavers Hall. All suites are fully furnished. Full suites include food prep and living rooms. No more than two students share a bathroom in any of the five suite unit types.

McLean Hall and Mowrey Hall are traditional residence halls with double occupancy and common bathrooms. Stone Ridge Commons offers one, two, and four bedroom apartments.

All housing facilities are wired with a free wireless computer network that allows each student access to e-mail, the Internet, library resources, and the university mainframe computer. Each room, suite, and apartment also has cable television, HBO, phone service, and voice mail. Laundry services are also available in all of the residential buildings. Student mail is processed at the UPS Store in the CUB, except for Stone Ridge Commons, which is processed at the apartment building.

Residency requirements for residing in campus housing are posted on the campus housing website. All students who either choose or are required to live in university campus housing are obligated to reside there for the entire academic year. Those students who live in university campus housing, with the exception of those living in the apartment building, are required to enroll in one of the required university campus food service plans. Furthermore, all students living in university campus housing are required to have a meningitis vaccination or a signed declination statement on file prior to moving into their assignment.

For more detailed information concerning university campus housing, go to [housing.ship.edu](http://housing.ship.edu).

## Student Services



# Career and Community Engagement Center

The Career and Community Engagement Center (CCEC), located in the Ceddia Union Building (CUB 108), provides student/alumni-centered career and community engagement programs, experiences, and learning opportunities to assist students to develop and achieve personal and professional goals. The Center implements career and community engagement program initiatives through service-learning, employer and alumni collaboration, and outreach on and off the University campus to foster campus and community partnerships.

CCEC provides resources in exploring career options, organizing job search programs such as preparing a resume, cover letter, and interview skills.

In addition, the CCEC provides students with career and employer information as well as volunteer opportunities through *Ship Career Connection*, which lists on/off campus opportunities, internships, and career events. Keeping with the CCEC's commitment to meet students' schedules and needs, the CCEC conducts walk-in hours, workshops on job search and interviews, mock interviews, outreach programs for classes and organizations, appointments, and holds evening hours. Give the CCEC a call at (717) 477-1484, an email at [career@ship.edu](mailto:career@ship.edu) or stop by the office for more information. Visit our website at [www.ship.edu/career](http://www.ship.edu/career) for more career and community engagement resources.

## Child Care

The university offers childcare through the Child and Family Center conveniently located on campus in the Grace B. Luhrs University Elementary School. The center offers developmentally appropriate curriculum, designed and led by four-year degreed teachers, as well as plenty of free play. Classes are tailored to five age ranges which include: Toddler A (12-24 months), Toddler B (24-36 months), Pre-school A (30 months-age 3), Pre-school B (ages 4-6), and School Age. Students enrolled at Shippensburg University are invited to make use of the Child and Family Center. In 2006, the center achieved NAEYC accreditation and currently holds a Keystone STARS Four-Star rating. Tuition subsidies may be available for qualified applicants. For information call 717-477-1792 or visit the Child and Family Center website at [www.sufoundation.org/services/childfamilycenter](http://www.sufoundation.org/services/childfamilycenter).

## Computing and Network Services

The university provides computing and network services for instruction, research, and administration. Students may access university e-mail, file space, and academic records. Students may also create a personal web site. Visit our website at [www.ship.edu/technology](http://www.ship.edu/technology).

## Computer Labs

The university maintains five general-purpose computer labs as well as dozens of departmental labs and computer classrooms. All campus labs include access to printing, the complete Microsoft Office suite, SPSS statistical software, and other standard course applications. Internet access for e-mail services, research, and accessing course management systems is available in each facility. General purpose labs in MCT are open 24 hours, 7 days per week. Computer workstations and laptops are also available in Ezra Lehman Memorial Library.

## Technology Help Desk

The university technology help desk provides a single point of contact for students experiencing problems relating to personal computer systems and/or network connectivity. Services provided to all students include assistance with

wireless connectivity, computer cleanup (virus, spyware and malware) and help with installation of university supplied software (such as anti-virus programs).

## Electronic Communication Policy

At Shippensburg University electronic mail (e-mail) offers efficient, effective, and timely communication between members of the university community. Thus e-mail is an official means of communication and the primary method for university faculty, administrators, and staff to contact all students. Students are expected to use the campus e-mail service and check their e-mail accounts on a regular basis because correspondence about administrative requirements, academic issues, public safety and health, judicial affairs, emergencies, and general matters will be sent in this manner. Much of this correspondence will be time-sensitive.

Students will be given a campus e-mail account at no cost. The account is active throughout a student's period of enrollment, including all vacation periods. Students wishing to utilize only off campus e-mail services are expected to forward their campus e-mail to that Internet provider or server. Otherwise, they are still expected to check their campus e-mail account on a regular basis. Failure to check one's campus e-mail account in a timely manner shall not be an excuse for missing deadlines or failing to meet communicated expectations.

Therefore, all students **must** do the following:

- Regularly check their accounts and read any e-mail in a timely fashion. It is preferable students read their e-mail on a daily basis but they are expected to do so at least four times per week, including all vacation and summer periods.
- Maintain their ship.edu inbox. In particular, all students are expected to ensure use of the university's computing systems and networks do not exceed current published limits, thereby interfering with one's ability to receive e-mail. All students are also expected to comply with all published policies governing computing and information networking.
- If people choose to use software to sort incoming e-mail into folders or to filter out unsolicited advertising e-mail (SPAM), they are responsible for making sure the filter rules do not accidentally delete official correspondence from the university.
- If students choose to forward e-mail from ship.edu to another e-mail server, they are responsible for making sure the e-mail is forwarded and working properly. They must also ensure their e-mail account has adequate space available to accept new messages.

## Counseling Services

The University Counseling Center (UCC) offers free, confidential counseling and psychological services for a wide range of issues, from personal growth and development to mental health concerns. Services provided include individual, couples, and group counseling; crisis intervention; and psychiatric services for undergraduate and graduate students; as well as prevention and consultation services for the entire university community.

Students' more common concerns include the following: depression; anxiety; self-critical feelings; academic concerns including procrastination and time management; sleeping problems; uncertainty about future/life after college; finances; relationships with family, friends, roommates, or romantic partners; problems with body image, eating, or weight; sexual concerns; and alcohol/other drug abuse.

The UCC is accredited by the International Association of Counseling Services, Inc. UCC records are confidential, and do not become a part of students' academic records. Only with a client's written permission will information be released to anyone outside of the UCC, except as required by law. The UCC is located in the Wellness Center in Naugle Hall and is open Monday through Friday, 8:30 a.m. to 5:00 p.m. when classes are in session. Call (717) 477-1481 or visit [www.ship.edu/counseling\\_center/](http://www.ship.edu/counseling_center/) for more information.

# Health Services

Student Health Services are provided by the Etter Health Center, located in the Wellness Center in Naugle Hall. It is open 7:30 a.m. through 11:30 p.m., seven days a week when school is in session. Hours may vary during semester breaks and holidays. Health care services are provided by registered nurses and a licensed medical physician. For further information, please refer to the health center web page: [www.ship.edu/Health\\_Center/](http://www.ship.edu/Health_Center/).

# Insurance

Because medical care outside Etter Health Center can be so expensive, students are strongly urged to subscribe to the Consolidated Health Plan Student Policy offered by the university, if they are not adequately covered by their parent's insurance. Remember that athletic insurance only covers costs related to that sport being played. For more information on the Student Insurance Plan, please see the Etter Health Center website: [www.ship.edu/Health\\_Center/](http://www.ship.edu/Health_Center/).

# Library and Multi-Media Services

The mission of the Ezra Lehman Memorial Library is to foster a community of academic success in an environment of personalized service, research mentorship and instruction, and connection to resources. In fulfilling this mission, the Library, Instructional Design and Web Technologies, Media, Technology Support Services, and Broadcasting Departments provide a variety of services, including the following:

- Individualized assistance in locating books, articles, and other resources in the Lehman Library, Luhrs Library (juvenile collection), online, or from other libraries.
- Document delivery of resources housed in the Lehman or Luhrs Libraries and acquired through interlibrary loan services.
- Help in evaluating useful Internet resources.
- Guidance in citing resources, avoiding plagiarism, and understanding copyright law and fair use guidelines.
- Personalized research consultations, for one-on-one research support and mentorship.
- Basic support with computer literacy and software applications used at the university, including D2L Learning Management System.
- Technology support in presentation software including video, audio, and image editing.
- Support and assistance with campus technology and student computing at the Technology Help Desk.
- Videoconferencing and classroom media support.
- Television studio production facilities and remote television production support.
- Equipment check-out for digital cameras, digital camcorders, LCD projectors, laptops, etc.

Visit the library online at [library.ship.edu](http://library.ship.edu) and Multi-Media Services at [www.ship.edu/media](http://www.ship.edu/media) and Technology Support Services at [www.ship.edu/technology](http://www.ship.edu/technology). For more information or assistance with an information or media-related need, call:

Lehman Library Circulation Desk  
(717) 477-1465

Lehman Library Research & Information Desk  
(717) 477-1474

Luhrs Library (Juvenile Collection)  
(717) 477-1003

Instructional Design and Web Technologies  
(717) 477-1816

Media Services  
(717) 477-1646

Broadcast Services  
(717) 477-1759

Technology Help Desk  
(717) 477-4357

## **Multicultural Student Center**

The Office of Multicultural Student Affairs (MSA) serves as a resource for all students. In addition to supporting academic success, the MSA strives to help students develop leadership skills, increase self-awareness, and participate in experiences that will enhance cultural awareness.

Located in Gilbert Hall, the staff members in the MSA office also assist groups such as the African American Organization, Latino Student Organization, Asian American Organization, Building Bridges, along with a host of other groups, with program development and implementation. The MSA works to improve the quality of life for all students enrolled at the university.

MSA is a family who supports, advocates, challenges, and encourages one another to succeed. Our mission is to educate and graduate students who will possess a vision for leadership and a will to excel. MSA touches the lives of people who will shape the future. We hope that you will visit us at our office, utilize our meeting rooms, and attend the events that we sponsor as well as those sponsored by our student groups.

Please feel free to contact Diane Jefferson directly at [djjeff@ship.edu](mailto:djjeff@ship.edu) if you would like to become involved with MSA or if you have ideas or suggestions!

## **Religious Life**

Students are encouraged to continue to participate in religious services of their choice while attending the university. As such, a Protestant Minister as well as a Roman Catholic Priest and Catholic Campus Minister are provided to the University community through the United Campus Ministries. Many local churches also minister to the spiritual concerns of all students and provide programming.

Contact Information: Cora I. Grove Spiritual Center  
Catholic Campus Ministry Office Room 215, (717) 477-1244  
United Campus Ministry Office Room 213, (717) 477-1672

## **University Store**

The University Store is located in the Ceddia Union Building.

The store provides textbooks, trade books, school supplies, gift items, imprinted clothing, greeting cards, and book-buy-back. The store is open Monday through Thursday, 8:00 a.m. to 7:00 p.m.; Friday, 8:00 a.m. to 5:00 p.m.; and 11:00 a.m. to 4:00 p.m. on Saturday during the school year. For additional information, call (717) 477-1600 or visit our website <http://ship.bkstr.com>.

## **Veteran's Services**

The Veterans Service Office provides support for students who are veterans or recipients of veteran's benefits. The office coordinates veteran's benefits and supports students with academic and personal issues. It develops activities and programs to help vets become involved with each other and the entire campus community including picnics, Veterans Day events, fundraisers for Wounded Warriors, and a 9/11-remembrance program.

The Veterans Resource Center, located in the Ceddia Union Building (CUB 235), provides a space to gather and meet with other vets. The university also has an active chapter of Student Veterans of America (SVA), which provides a fellowship of like-minded individuals and creates a network of students and alumni for professional and leadership development.

For more information, go to [www.ship.edu/veterans/](http://www.ship.edu/veterans/).

## **Women's Center**

The Women's Center of Shippensburg University advances the equality and empowerment of woman-identified students, faculty and staff. In line with the Shippensburg University Mission Statement, the Women's Center assists students in their personal, social and ethical development through educational programs, specialized resources, celebration of achievements by and for women, and the pursuit of social justice.

Using empowerment theory to guide our actions, the staff and volunteers of the Women's Center advocate for victims of sexual misconduct, intimate partner abuse, and other violent crimes. We are dedicated to fostering a safe educational environment that is both respectful and inclusive to all members of our campus community. All women and men are welcomed and encouraged to use the Women's Center services and resources.

Guided by empathy, integrity, open-mindedness and a strong commitment to collaboration, the Women's Center works towards equality, empowerment and ending violence for all members of the Shippensburg University community. The Women's Center serves the campus community by hosting programs, conferences, workshops and other events. The Women's Center's conference room, lounge, and library are valuable resources to members of the campus community. The Women's Center is located on the first floor of Horton Hall and is online at [www.ship.edu/womens\\_center](http://www.ship.edu/womens_center). You can contact the Women's Center at 717.477.1790 or [womenscenter@ship.edu](mailto:womenscenter@ship.edu).

## **Weather Conditions**

Information pertaining to cancellation of classes due to bad weather will be available by calling HOTLINE at (717) 477-1200 or visiting [ship.edu/weather](http://ship.edu/weather). When classes are canceled, radio stations in the general area will be notified. When classes are not canceled students should use their own good judgment as to whether they can make it to classes without taking unnecessary risks regarding their own safety. Accordingly, students who are unable to attend classes are responsible for contacting the instructor to make arrangements for making up any work missed.

## **Tuition and Fees**

Please note: All fees and dates listed in this chapter are subject to change. For up-to-date information, go to [www.ship.edu/Student\\_Accounts/Tuition\\_and\\_Fees/](http://www.ship.edu/Student_Accounts/Tuition_and_Fees/).

## **Summary of Costs for Pennsylvania Residents**

**Fees Per Semester 2017-18****Commuting Students**

Tuition 15 credits	\$4,500.00
Technology Tuition Fee	\$232.00
Student Activity	\$272.00
Student Recreation Fee	\$185.00
Student Union Fee	\$300.00
Comprehensive Health Fee	\$170.00
Educational Services Fee	\$384.00

**Total \$6,043.00****Residence Hall Students**

Tuition 15 credits	\$4,500.00
Technology Tuition Fee	\$232.00
Student Activity	\$272.00
Student Recreation Fee	\$185.00
Student Union Fee	\$300.00
Room and Board**	\$5,770.00
Comprehensive Health Fee	\$170.00
Educational Services Fee	\$384.00

**Total \$11,813.00****Off-Campus Students**

Tuition 15 credits	\$4,500.00
Technology Tuition Fee	\$232.00
Student Activity	\$272.00
Student Recreation Fee	\$185.00
Student Union Fee	\$300.00

Board* (15-meal plan with \$250 Flex)	\$1,830.00
Comprehensive Health Fee	\$170.00
Educational Services Fee	\$384.00

**Total \$7,873.00**

\* *These students live in the town of Shippensburg and take their meals at the university (optional).*

\*\* *Based on 2 person, 1 bedroom semi-suite and 15-meal plan with \$250 Flex; other plans available.*

### **Fees for Summer Sessions 2017**

Fees and due dates are subject to change.

Tuition	per credit \$281.00
Technology Tuition Fee	per credit \$19.00
Educational Services Fee	per credit \$30.00
Student Union Fee	per credit \$20.00
Student Activity	per credit \$18.00
Comprehensive Health Fee	per credit \$11.00
Student Recreation Fee	per credit \$12.00

## **Payment of Fees**

The fees for each student are payable in advance as indicated below. Payment may be made online with check or credit card (Visa, MC, Discover, American Express) or by mail with check or money order. All checks shall be made payable to Shippensburg University. **Do not send cash by mail.** To be admitted to classes, the dining halls, or any university activity, each student must have satisfied their semester tuition bill and be in possession of a valid identification card. Fee payment for fall semester is due early August and for spring semester is due early January.

## **Delinquent Accounts**

No student shall be enrolled, graduated, or receive a transcript until all previous accounts have been paid. Accounts delinquent for 90 days are turned over to the Pennsylvania Attorney General for collection.

## **Tuition**

### **Pennsylvania Residents**

For 2017-2018, a basic tuition fee of \$300 per credit will be charged to each registered student (**all fees subject to change**). Summer session basic fee shall be \$300 per credit hour for all Pennsylvania residents.

Undergraduate students pay the undergraduate rate for all courses, both undergraduate and graduate courses.

*Tuition policy subject to change.*

## Out-of-State Students

For 2017-2018, full-time students whose legal residence is not in the state of Pennsylvania shall be charged an out-of-state tuition fee of \$8,429 per semester in addition to all other fees. Students taking more than 18 credit hours shall pay the out-of-state tuition fee plus \$702 per credit hour over 18.

Out-of-state students who are part-time shall be charged a tuition fee of \$702 per credit hour and other applicable fees. Summer sessions fees are \$702 per credit hour.

High-achieving non-residents and non-residents who select a STEM or STEM education major are charged a tuition fee of \$6,556. per semester. Qualifications for this Out-of-State Tuition Advantage Program can be found at [www.ship.edu/Admissions/TAP/](http://www.ship.edu/Admissions/TAP/).

Non-resident students enrolled in the Dual Admission Program are charged a tuition fee of \$5,619 per semester. Information on the Dual Admissions Program can be found at [www.ship.edu/Admissions/Transfers/Dual\\_Admissions\\_FAQ/](http://www.ship.edu/Admissions/Transfers/Dual_Admissions_FAQ/).

*Fees are subject to change. Summer fees are for 2017 only and are subject to change.*

## Semester Fees

**Please note: All fees and dates listed in this chapter are subject to change.**

## Room and Board Fee

Students may currently choose to live in traditional or suite-style residence halls. The 2017-2018 room fee for traditional halls is currently \$2,423 per semester. The room fee for suite living ranges from \$3,940 to \$4,999. All students residing in the residence halls must pay the room fee, as well as the board (meal) fee. The most common meal plan, 15 meals per week with \$250 flex, currently costs \$1,830. Room and board is available for summer sessions.

Students arranging for housing services for periods of time differing from those set forth in the foregoing regulations shall pay fees on a pro-rated basis.

All arrangements for housing services other than those indicated above shall require prior approval by the Vice President for Student Affairs.

For a comprehensive list of room and meal rates, visit the Student Accounts web page.

## Student Activity Fee

This fee is collected from all undergraduate students and is administered through Student Services, Inc. under regulations approved by the Council of Trustees. This fee covers the cost of supporting student organizations, athletics, lectures, entertainment, and publications.



The student activity fee is currently \$272 per semester for students taking 12 or more credits. Students taking 1-11 credits pay \$23 per credit. The summer activity fee is \$18 per credit. (2017-18 rates)

## **Student Recreation Fee**

This fee is collected from all undergraduate students and is administered through Student Services, Inc. under regulations approved by the Council of Trustees. This fee is used to fund the construction, maintenance/operational, and personnel costs related to the student recreation building and the 12-acre lighted outdoor recreation facility which includes playing fields for football, rugby, soccer, and baseball/softball; volleyball courts; fitness track; street hockey pavilion; and picnic pavilion.

The student recreation fee is currently \$185 per semester for students taking 12 or more credits; students taking 1-11 credits pay \$15 per credit. The summer recreation fee is \$12 per credit. (2017-18 rates)

## **Student Union Fee**

State law and policies of the Board of Governors of Pennsylvania's State System of Higher Education require the cost of constructing the original Ceddia Union Building and its additions be paid by students enrolled at the university. This fee is applicable to all full- and part-time students, both graduate and undergraduate, during both regular semesters and summer sessions, in accordance with the following schedule established by the university Council of Trustees:

The student union fee is currently \$300 per semester for undergraduates taking 12 or more credits; students taking 1-11 credits pay \$25 per credit. The summer student union fee is \$20 per credit. (2017-18 rates)

## **Comprehensive Health Fee**

A Comprehensive Health Fee will be charged to all full- and part-time students in all semesters and sessions to finance, in part, the Etter Health Center and its various programs of treatments and education and the Counseling Center. Students have access to the services of the health center 24 hours a day, 7 days a week. Under the policies of the State System Board of Governors, auxiliary enterprises, such as health centers, must be financially self-sufficient. The Comprehensive Health Fee is not an insurance fee and must be paid whether or not the student has his/her own health insurance. This fee is currently \$170 per semester for students taking 12 credits or more. Students taking 1-11 credits pay \$14 per credit.

The summer Comprehensive Health Fee is \$11 per credit. (2017-18 rates)

## **Educational Services Fee**

An educational services fee will be charged to all students in all semesters and sessions to cover unusual costs of certain special programs and/or operational and equipment needs. This fee is currently \$384 per semester for students taking 12 credits or more. Students taking 1-11 credits pay \$32 per credit.

The summer educational services fee is \$30 per credit. (2017-18 rates)

## **Technology Tuition Fee**

This fee is set annually by the State System Board of Governors. Purposes of the technology tuition fee are: to acquire, install, and maintain up-to-date and emerging technologies for the purpose of enhancing student-learning outcomes; to

provide equitable access to technology resources; and to ensure State System graduates are competitive in the technologically sophisticated workplace.

The technology tuition fee is not a user fee. It is a fee paid by all students, proportional to their enrollment status (full-time/part-time) and to their residency status (in-state/out-of-state).

Currently, the technology tuition fee for full-time students is \$232 in-state and \$353 out-of-state. Part-time students are charged \$20 per credit in-state and \$30 per credit out-of-state. The summer technology tuition fee is \$19 per credit in-state, \$29 per credit out-of-state. *(2017-18 rates)*

## Special Fees

**Please note: All fees and dates listed in this chapter are subject to change.**

### Application Fee

An application fee of \$45 for students seeking admission or readmission to the university shall accompany the application for admission. This fee covers processing the application and is not refundable. Non-degree students shall pay an application fee of \$15.

### Orientation Fee

A one-time \$150 orientation fee will be paid by each new student (first year and transfer) to support orientation programs at the university. This fee will be charged whether or not the student chooses to attend orientation.

### Damage Fee

Students are financially liable for damage, breakage, loss, or delayed return of university property, as determined by the appropriate university administrators. A common damage fee of \$10 per semester per residence hall student will be charged.

### Degree Fee

A fee of \$35 shall be paid by each undergraduate candidate to cover the cost of the diploma.

### Bad Check Fee

A fee of \$35 may be charged for each paper check or electronic check that is not honored by the payer's bank.

### Credit by Exam Fee

An administrative fee of \$80 will be charged for each course taken by examination for credit, regardless of the number of credits. This fee is payable prior to sitting for the examination.

# Late Registration Fee

Students confirming attendance by submitting the semester payment after the semester billing due date will be required to pay a late payment fee of \$100.

# Deposits

**Please note: All fees, deposits, refunds, and dates listed in this chapter are subject to change.**

## Advance Registration Deposit

An advance registration deposit of \$100 shall be paid by all new students. This deposit is required when the student is approved for admission to the university. This is a guarantee of the applicant's intention to register at the university for the semester indicated on the admissions letter. The amount of \$100 is deposited with Shippensburg University to the credit of the student's basic fee. Advance deposits are non-refundable.

## Residence Hall Room Deposit

Returning students who arrange to live in university housing during the academic year are required to confirm the room assignment by paying a deposit. New students will pay the deposit when they are approved for admission to the university. This deposit will be an advance payment toward the room fee for the second semester of the academic year. No residence hall reservation will be held unless it is confirmed by the payment of this deposit.

A refund of the deposit will be allowed only if the student is dismissed from the university for academic reasons.

# Refunds to Students

**Please note: All fees, deposits, refunds, and dates listed in this chapter are subject to change.**

*The refund procedure and schedules below are currently in effect. Refund policies and percentages may be changed by Pennsylvania's State System of Higher Education.*

Requests for refunds must be submitted in writing to the dean of the appropriate college, who must consider each such request and forward a recommendation to the registrar, who will notify the Student Accounts Office. For refunding purposes, a student is considered to be in class attendance up to the date on which official notification of withdrawal is given. **Students will not receive refunds for courses dropped after the drop period each semester.** Refunds are only issued for full university withdrawals from all classes in the semester. The official date of withdrawal is the date the college dean approved withdrawal. Refunds are not authorized for temporary absences within the semester.

The housing fee is not refundable when a student terminates occupancy of a residence hall for reasons other than withdrawal from the university, except when a student moves to his/her permanent home address because of financial or other emergency reasons. This exception must be authorized by the housing director.

The refund policy is summarized below and applies to students who withdraw from the university. The policy is mandated by the State System Board of Governors.

# Refund Policy for University Withdrawals for classes held in the full 16 week semester

## *Reduction in Charges*

Through drop period	100%
Drop period through 2nd week	80%
3rd week	60%
4th week	50%
5th week	40%
After 5th week	No refund

# Refund Policy for Room and Board

## *Reduction in Charges*

Day 1- end of 1st week	90%
2nd week	80%
3rd week	60%
4th week	50%
5th week	40%
After 5th week	No refund

Charges are based on the check-out date and date of last meals or flex eaten. Block meal plans and flex plans are based on actual usage through the 5th week. Standard meal plans are based on the percentages above.

Advance deposits, orientation fee, and technology fee are non-refundable.

# Refund Policy for Summer Sessions (2017)

## *Reduction in Charges*

### **6-Week Term**

Day 1-3	100%
Day 4-5	80%

Day 6-8	60%
Day 9-11	50%
Day 12-13	40%
Day 14	No Refund

Days in the summer refund schedule include weekend days.

**The refund schedules assume the student account is paid in full and the percentages are not being applied to a partial payment of tuition.**

If a student is a recipient of federal Title IV financial aid, calculations must be made to determine the percentage of earned and unearned aid based upon the official withdrawal date. The amount of aid that is earned is determined on a pro-rated basis. For example, if 30 percent of the semester has been completed, then 30 percent of the aid is earned. Once more than 60 percent of the semester has been completed, then 100 percent of the aid is earned. If more Title IV aid has been earned than received, then a post withdrawal disbursement may be due to the student. If more Title IV aid has been received than earned, the school must return a portion of the excess aid.

Returns of unearned aid to the federal programs are required by law to be the first priority and must be returned in the following order:

1. Federal Unsubsidized Loan
2. Federal Subsidized Loan
3. Federal Perkins Loan
4. Federal Parent PLUS Loan
5. Federal Pell Grant
6. Federal SEOG
7. Federal TEACH Grant

**In many cases a student may owe a balance to the university after Title IV aid is returned.**

For more up-to-date detailed information regarding refunding and the calculations of earned and unearned aid, please visit the Student Accounts link of the Shippensburg University website at [www.ship.edu](http://www.ship.edu).

*Refund policies are subject to change by the university and the State System.*

## Fee Waiver for Senior Citizens

Tuition charges and all fees, except the Educational Service Fee and Technology Fee, may be waived for senior citizens enrolled in any undergraduate program providing space is available within the desired course(s) and class(es).

Applications for this waiver should be initiated by the requesting student, through the dean of the college in which the student is enrolling, prior to registration for the course(s) to which it will apply. Requests for retroactive waivers will not be considered. All other fees described in this catalog are due and payable at time of registration.

A senior citizen is defined as a retired United States citizen residing in the Commonwealth of Pennsylvania who is 60 or more years of age. Documentation proving the requesting student meets the above eligibility criteria will be required.

## Pennsylvania Resident Status

Students enrolling at Shippensburg University shall be classified as resident or nonresident for admission, tuition, and fee purposes by the Admissions Office. The decision shall be based upon information furnished by the student and all other relevant information. The Admissions Office is authorized to require such written documents, affidavits, verifications, or other evidence as are deemed necessary to establish the domicile of a student. The burden of establishing residency for tuition and fee purposes is upon the student.

If there is a question as to residence after the student matriculates, the matter must be brought to the attention of the vice president for student affairs at least two weeks prior to the deadline for the payment of tuition and fees. Any student found to have made a false or misleading statement concerning residence shall be subject to institutional disciplinary action and will be charged the non-resident fees for each academic term heretofore attended.

## **Residence Determined by Domicile**

A minor is presumed to have the domicile of his/her parent(s) or guardian. The age of majority in the Commonwealth for establishing a domicile for tuition purposes is 22. Domicile within the Commonwealth means adoption of the state as a fixed permanent home and involves personal presence within the state with no intent on the part of the applicant or, in the case of the dependent student, the applicant's parent(s) to return to another state or country. Residing with relatives (other than parent(s)/legal guardian) does not, in and of itself, cause the student to attain residence in the Commonwealth for admission or fee payment purposes. Pennsylvania domicile may be established upon the completion of at least 12 months of continued residence within the state prior to the date of registration, provided such 12 months residency is not primarily for the purpose of attendance at Shippensburg University.

Establishment of Pennsylvania domicile with less than 12 months residence prior to the date of registration must be supported by proof of positive and unequivocal action. Priority consideration will normally be given to such evidence as the purchase of a Pennsylvania home, full-time employment within the state, paying Pennsylvania property tax, filing Pennsylvania income tax returns, and registering motor vehicles in Pennsylvania. Other items of importance that are required are registering to vote in Pennsylvania and the actual exercise of such right, possessing a valid Pennsylvania driver's license, and various other acts which may give evidence of intent to remain indefinitely within the state. Proof of a number of these actions shall be considered only as evidence which may be used in determining whether or not a domicile has been established. Factors mitigating against establishment of Pennsylvania residency might include such considerations as the student not being self-supporting, being claimed as a dependent on federal or state income tax returns, or the parents' health insurance if the parents reside out-of-state, and receiving financial assistance from state student aid programs in other states.

A student receiving a scholarship or grant dependent upon domicile from a state other than Pennsylvania is not domiciled in Pennsylvania.

## **Dependency Status**

A dependent student is one who is listed as a dependent on the federal or state income tax return of his/her parent(s) or legal guardian or who received major financial support from that person. Such a student maintains the same residency as that of the parent(s) or legal guardian. In the event the parents are divorced or legally separated, the dependent student takes the residence of the parent with whom he/she lives or to whom he/she has been assigned by court order.

A minor may prove emancipation and independent domicile through convincing evidence. A non-resident student who becomes independent while a student at Shippensburg University does not, by reason of such independence alone, attain residence in the state for admission and fee payment purposes.

## **Change of Residence**

A student who has been classified as an out-of-state resident and who seeks resident status must assume the burden of providing conclusive evidence he/she has established domicile in Pennsylvania with the intention of making his/her permanent home in this state. The intent to remain indefinitely in Pennsylvania is evidenced not only by a person's statements but also by that person's actions.

An application should be obtained from the Office of the Vice President for Student Affairs and returned to that office at least two weeks prior to the deadline for the payment of tuition and fees with sufficient evidence to support a request for a change to in-state residency for fee paying purposes.

A student who changes domicile from Pennsylvania to another state must promptly give written notice to the Office of the Vice President for Student Affairs.

## **Military**

A member of the armed forces who was domiciled in the Commonwealth immediately preceding entry into government service and who has continuously maintained Pennsylvania as his or her legal residence shall be presumed to have a Pennsylvania domicile.

Any military personnel or their dependents who are assigned to an active duty station in Pennsylvania and who reside in Pennsylvania shall be considered Pennsylvania residents for tuition payment purposes.

## **Aliens**

A person attempting to establish domicile shall be a citizen or shall have indicated by formal action intention to become a citizen or shall have been admitted to the United States on an Immigrant Visa.

## **Financial Aid**

The university makes every effort to serve eligible students in need of financial assistance through part-time employment, loans and grants, or scholarships.

**Please note: All fees, dates and aid amounts listed in this chapter are subject to change .**

## **Financial Aid Application**

All prospective and returning students who wish to receive financial aid (grants, loans, and student employment) must complete the Free Application for Federal Student Aid (FAFSA) every year. Financial need will be determined by subtracting the Expected Family Contribution (calculated using a federally legislated formula and the information provided on the FAFSA) from the total cost of attendance for a year at Shippensburg University, to determine need for aid.

The results of the FAFSA must be received by the Financial Aid Office by May 1 of the upcoming academic year for a Pennsylvania student to be considered for PHEAA State Grant. Students are advised to complete the FAFSA by March 30 in order to meet the State Grant date of May 1st. Our Title IV School Code is 003326.

## **Course Program of Study**

Your enrollment affects eligibility for federal financial aid. Federal regulations require students to be enrolled in an approved degree-seeking program. Only coursework that counts toward the completion of the degree will be used in determining enrollment status for federal financial aid purposes (grants, loans, and Federal Work-Study).

## Academic Progress

Federal regulation requires students to make Satisfactory Academic Progress (SAP) toward the completion of a degree in order to maintain their eligibility for the following programs: Federal Pell Grant, Federal Teach Grant, Federal Perkins Loan, Federal Supplemental Educational Opportunity Grant (SEOG), Federal Work Study, Federal Direct Loans, and Federal PLUS Loan. Federal policies concerning SAP dictate that SAP must be measured three ways. By:

- Cumulative GPA
- Percentage of Credits Earned (Pace)
- Maximum Time Frame

Undergraduates must meet the following guidelines for federal aid:

- Maintain a 1.7 cumulative GPA during your first three terms of enrollment (transfer credits from other schools will be counted based on terms enrolled at previous school)
- Maintain a 2.0 cumulative GPA for your fourth term of enrollment and beyond
- Complete (pass) at least 67% of credits attempted. Example: if you have attempted 30 credits, and have passed 21 credits, you have passed 70% of your credits. If you attempted 30 credits and passed only 18 credits, you have earned only 60% of your credits and would not be making Satisfactory Academic Progress.

The PHEAA State Grant program has slightly different criteria for determining satisfactory academic progress. A full-time State Grant recipient must complete 24 new credits\* per academic year to maintain eligibility for the grant. A part-time student must complete the proportional equivalent in order to maintain eligibility (e.g., if two half-time awards are awarded in a year, the student must complete at least 12 new credits in that year).

Satisfactory Academic Progress for federal aid will be measured at the end of fall, spring and summer terms.

Satisfactory Academic Progress for PHEAA state grant is determined annually, at the end of spring term.

For complete information on Satisfactory Academic Progress, go to [http://www.ship.edu/Financial\\_Aid/Eligibility/](http://www.ship.edu/Financial_Aid/Eligibility/).

\*Repeated courses count as new credits only if the student originally received an F or W in the course.

## Student Campus Employment

Part-time employment opportunities on campus are available through the Federal (FWS) and Commonwealth work programs. Students with financial need as demonstrated through the completion of a Free Application for Federal Student Aid (FAFSA) are considered for Federal Work Study (FWS). Students receiving FWS can receive guidance in job placement from the Financial Aid Office. These positions include work in administrative and faculty offices, the library, residence halls, and campus grounds.

All students interested in working on campus (both FWS awarded students, and all other students) are encouraged to utilize the electronic job board hosted by the Office of Career Development. Directions on setting up your profile and exploring available positions on campus and in the surrounding area can be found at: <http://www.ship.edu/Career/>.

### Summer Campus Employment

Summer employment opportunities can be accessed through the Ship Career Website. Please refer to Student Campus Employment section and follow those instructions.



# Grants and Loans

## **PHEAA State Grant**

The Pennsylvania State Grant program is a potential source of funding for Shippensburg University students who are residents of Pennsylvania. The PA state grant program is administered by PHEAA (Pennsylvania Higher Education Assistance Agency). Pennsylvania state grant awards can range from \$500 to \$4000 depending on the level of funding set by PHEAA each year. A student's eligibility will be determined by PHEAA based on financial need and cost of attendance at the college. Students must be enrolled in courses applicable to the degree or program objective to which funds are disbursed.

Students apply for the PA state grant by completing the FAFSA application no later than May 1st of each year. Students must complete their FAFSA (Free Application for Federal Student Aid) by the May 1st deadline to be considered for the PA state grant for the award year. All FAFSA applications submitted after May 1st will be considered late for the PA state grant program.

When students complete the FAFSA and indicate Pennsylvania residency, they will be offered an optional link on the FAFSA certification page that will ask if they would like to complete the PA State Grant form. Those students who choose this link will be moved directly to the on-line State Grant form. For students who do not complete the State Grant form at the same time as they submit their initial FAFSA, an email from PHEAA will be generated directing the student to Account Access at [www.pheaa.org](http://www.pheaa.org) to complete the State Grant form.

Additional information may be requested by PHEAA after the initial PA State Grant form is filed. This request will be sent to the email address provided on the FAFSA. Students and parents should respond directly to PHEAA with the information requested.

## **Federal PELL Grant**

The Federal Pell Grant is gift aid and awarded to undergraduate students pursuing their first bachelor's degree. Eligibility is based on a federal formula using the information provided on the Free Application for Federal Student Aid (FAFSA). Awards vary from \$626 to \$5,920 (in the 17-18 year) depending on financial need. Eligibility will vary based on credit hours. Amounts may change based on federal regulations. Not all students will qualify.

## **Federal Supplemental Educational Opportunity Grant (SEOG)**

A limited amount of funds from the Federal Supplemental Grant (SEOG) program are available for students demonstrating highest financial need. The information provided on the FAFSA will be used to determine student eligibility. Federal SEOG is awarded to Pell eligible students. Awards vary based on financial need and fund availability. Not all students will qualify.

## **Federal Direct Loan Program**

### *The Federal Direct Loan*

The Federal Direct Loan is available for all students enrolled at least half-time. There are two types of Federal Direct Loans: subsidized and unsubsidized. The subsidized loan is interest-free while the student is in school and is awarded based on financial need. Interest accrues on the unsubsidized loan while the student is enrolled in school. The borrower may opt to pay it as it accrues, or allow it to accrue and capitalize. The unsubsidized loan is a non-need based loan program.

The maximum Federal Direct Loan per academic year is currently \$5,500 for freshmen, \$6,500 for sophomores, and \$7,500 for juniors and seniors. An independent student may borrow an additional \$4,000 per year as a freshman or sophomore, and an additional \$5,000 per year as a junior or senior. To be eligible for a loan, a student must be accepted for matriculation or matriculating at Shippensburg University.

### *The Federal Direct Parent Loan*

The Federal Direct Parent Loan for Undergraduate Students is available for parents of dependent undergraduate students. A parent may borrow up to the cost of attendance less any other financial aid received. It is a fixed interest rate loan on which the parent may begin repayment 60 days after it is disbursed or allow it to accrue and capitalize.

### *Application Instructions and Disbursement Information*

To apply for a Federal Direct Loan, the student/parent should apply online at [www.studentloans.gov](http://www.studentloans.gov).

The amount borrowed will be issued via electronic funds transfer. Loans are disbursed in two equal disbursements over the course of the loan period (for example, a fall/spring loan would have two disbursements: one in the fall semester and the other in the spring semester). The loan must be for educational expenses. The student borrower, regardless of age, will be solely responsible for receiving and repaying any student loan under the Federal Direct Loan program.

## University Curricula

All undergraduate curricula of the university lead to the bachelor's degree and have a common area of general education subjects, which provide a rich, liberal education. The selection of a particular curriculum is one of the most important decisions you will make as a college student. It determines your major area of concentrated study and also directly or indirectly determines your professional future.

The selection of a curriculum or area of specialization should be made with care after considering your academic strengths, areas of interest, plans for future study, and career goals. You may want to consult with friends, family members, university counselors, or faculty advisors before making a decision. If you plan to undertake graduate study after completing your bachelor's degree, you should look into the admissions requirements for the schools and graduate programs you are considering.

If you do not declare a major at the time you are admitted, you will be enrolled as an exploratory studies student under the Office for Exploratory Studies. The office provides a wide variety of academic support services so exploratory studies students can make normal progress toward a degree while exploring educational and career options. Exploratory Studies students must declare a major by the middle of their sophomore year. The dean of the School of Academic Programs and Services is the academic dean for all exploratory studies students.

## Undergraduate Degrees

Shippensburg University provides undergraduate curricula leading to five degrees:

- *Bachelor of Arts (B.A.)*
- *Bachelor of Science (B.S.)*
- *Bachelor of Science in Business Administration (B.S.B.A.)*
- *Bachelor of Science in Education (B.S.Ed.)*
- *Bachelor of Social Work (B.S.W.)*

These degree programs are offered by the College of Arts and Sciences, the John L. Grove College of Business, and the College of Education and Human Services.

## Departments and Majors

The following table lists the departments in each college and the major programs available for each department.

# General Education

- General Education

## Shippensburg University

### College of Arts and Sciences

#### College of Arts and Sciences Overview

The College of Arts and Sciences has three primary areas of emphasis: educating undergraduates, offering master's level programs where the college can offer a program that is distinctive and of high quality and providing general education courses to all undergraduate students. The college, the largest in the university, occupies a central place in the education of all undergraduate students because of its general education mission. The college also has a public service role it fulfills through the activities of the Center for Land Use and the SU Fashion Archives and Museum.

In both its degree programs and in the general education curriculum, the college strives to enable students:

- to read critically
- to write and speak clearly and eloquently
- to use numbers and scientific methodology effectively
- to understand the fundamentals of the current state of scientific knowledge
- to appreciate works of art and other cultural artifacts from their own and other societies
- to understand the fundamentals of world history and geography, the importance of other cultures, and the increasing interdependence of cultures
- to understand the structure of social, political and psychological processes
- to function effectively as informed and active participants in a democratic society

For many students, participating in an internship connects classroom learning with real-world experience. The college offers internships in many programs, subject to approval. Check with the department chair for more information.

The ultimate aim of the college is to enhance the development of students so they may lead meaningful lives as private individuals, professionals, and citizens.

Providing students with opportunities to acquire the knowledge and habits of mind that lead to present and future accomplishment is the goal of a liberal arts education and of the programs that define Shippensburg University's College of Arts and Sciences.

In the College of Arts and Sciences, students have available to them programs leading to the degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Science in Education.

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level *or* three years of any one foreign language in high school.

Students may also meet this requirement through AP testing or CLEP testing.

#### Bachelor of Science in Education Degree Programs

Earth-Space Science

Physics

Comprehensive Social Studies

(Geography Concentration)

(History Concentration)

The specific requirements for each of these fields are presented in the following pages under each department.

Transfer students should note the restrictions that apply to transfer admission into programs in the biology, chemistry, communication/journalism, and psychology programs.

Students interested in law school should consult with Dr. Steven Lichtman of the Political Science Department, who is the representative of the American Law School Committee of Admissions.

The graduate programs of the College of Arts and Sciences are presented in the Graduate Catalog.

## **Art and Design Department**

The Department of Art and Design offers an undergraduate program leading to a Bachelor of Arts degree or a Bachelor of Arts in Art Education Certification, K-12. For successful completion of both B.A. degree in art and art education certification, K-12, each student is expected to demonstrate knowledge, skills, and understandings within the following five categories (No. 5 pertains to the B.A. in Art Education Certification, K-12):

1. Promote visual literacy; e.g., the understanding of a work of art through its connections with history, criticism, aesthetics, culture, style, and the formal elements.
2. Demonstrate the ability to create and solve the production of original, visual forms of expression in different media designed around a theme and to promote the interdisciplinary importance of art making as a method of knowing.
3. Develop critical thinking in strategies of inquiry, iconology, and comparative studies that will promote cross-cultural and ethnically diverse methods of art making.
4. Establish methods of working and understanding the creative process and production in a variety of two- and three-dimensional media-graphics, computers, painting, ceramics, sculpture, printmaking, and conceptual/interdisciplinary work styles.
5. Develop methodology for effective teaching; creating lesson plans appropriate for a variety of academic venues; learn how to communicate effectively; be able to demonstrate effective technical skills; and understand the role of art education in human development.

## **Foundation Portfolio Requirements**

After admission to the art major and art education certification (K-12) programs, students must present a portfolio of their original artwork for review to the art and design department faculty. Specific requirements for content of this portfolio can be requested from the art department chairperson, departmental secretary, or the art department website at [www.ship.edu/art](http://www.ship.edu/art). The Foundation Portfolio is a required component of the art and design department for all freshmen and transfer students from other colleges or internal transfers within SU. The Foundation Portfolio Review is given one time per year, the third Tuesday of September. All new and transfer students will participate in this review the first September after they have become an official art or art education major.

## **Yearly Student Art Exhibit**

Each year art majors are required to submit a minimum of two pieces of art for the annual student art exhibit. These works of art must be properly framed or mounted using appropriate materials for display.

## Senior Art Seminar and Exhibit

The Senior Art Seminar is a three-credit capstone course which is a two semester sequential program beginning in the fall semester of each academic year. Students may not enter the course mid-year and must plan their schedule accordingly. Students planning to graduate in December must complete this course the academic year prior to their graduation. Students enrolled in the Senior Art Seminar examine contemporary artists, art movements and influences which directly impact their work and area of concentration. Emphasis will be placed on creating a portfolio of work with a specific focus conceived by the student. These works will be presented in a public exhibition, which is juried and held annually the week before graduation. Participation in this exhibition is required for graduation. Résumé preparation and developing a career portfolio will also be included in this course.

## Art and Design Features

The Department of Art and Design offers an undergraduate program leading to a Bachelor of Arts degree in art or Bachelor of Arts in Art Education Certification-K-12. For students who wish to pursue a career in graphic design, the department offers a Certificate in Graphic Design and an interdisciplinary concentration in computer graphics with the Department of Computer Science and Engineering. Students may enroll in one or both of these programs of study. Because of the department's variety of courses and degrees, its cooperative programs with two major institutions, the Art Institutes International (AII) and the Fashion Institute of Technology (FIT), the Shippensburg art graduate has a wide range of career opportunities.

The Department of Art and Design has a strong and effective advising program which encompasses the entire educational experience of every art and art education major. Twice yearly, advising meetings bring alumni back to the university for panel discussions and "real-life" dialogue. Continual development of selected topics, visiting artists' programs, trips to Washington, D.C., New York City, Philadelphia, and credit-bearing trips to foreign countries provide students with ample opportunities to view the world of art.

Other options: With the 33 credits of free electives, many students choose a number of different options. The student can double major, minor in another field such as business, or strengthen their art major by taking additional unrestricted art electives. Selecting a double major, including art/communication, art/business or art/psychology, increases career options. Programs such as the Interdisciplinary Arts degree allow students to create a program to match their needs.

Students who transfer into the Art Education Program from outside or from within Shippensburg University must complete an Application for Professional Standing. The requirements necessary to become an art education major include: passing the required Praxis I examinations, maintaining a 3.0 QPA, and attending an interview with art department faculty where a basic art portfolio demonstrating specific competencies is presented. Specifics of this portfolio are available from the chair or secretary, as well as from the art department website at [www.ship.edu/art](http://www.ship.edu/art). Art education majors will complete some of their courses in the Department of Teacher Education in the College of Education and Human Services. Candidates will complete a 15-week student practicum and pass the PRAXIS II exam prior to graduation and certification. All Art Education majors are subject to the rules and regulations set forth by the Office of Field Services at Shippensburg University. A post baccalaureate program in Art Education Certification is offered through the College of Education and Human Services. These programs are regulated by the Pennsylvania Department of Education.

Internships provide important real-life experiences. Some students serve as interns in galleries, museums, advertising agencies, or art supply stores. Some art students, especially those in the art education program, assist in local community art centers by helping to teach classes for adults and children. Others have worked as apprentices on art projects in the Department Art and Design's Golden Apple Computer Lab or Sculpture Studio, or in computer graphics

agencies. Some students have apprenticed with professional painters, ceramicists, and sculptors. The department is continually developing a pool of sources for internships in both the public and private sector.

Three Department of Art and Design organizations give students an opportunity to have some first-hand experiences in the field. One organization, the Student Art League, holds weekly "art making and critiquing" studios. The Visivo Club creates a professional artistic publication yearly using the computer creatively to design and lay out the work for the book. Through this publication students gain practical experiences in design, photography, writing, editing, and printing. The Art Exhibitions Committee gains practical gallery training through organizing and staging eight exhibitions yearly.

Art students who may one day wish to own and operate their own businesses are encouraged to take the Business Minor offered through the John L. Grove College of Business.

## Art Career Opportunities

Art is actually used in any circumstance that requires visual discrimination: What looks better, this or that? The fine artist attempts to make a visual statement through a painting or a piece of sculpture by continuously discriminating with the art elements. All of the design fields actively engage in visual decision making—industrial, fabric, fashion, interior, graphic and advertising design.

Courses provide students with a sound fine arts background in studio experience, art history, and art criticism. Computer design courses prepare students' marketability in industry, publishing, and advertising. They can prepare for a number of art-related careers. Our graduates are museum curators, art educators, gallery directors, illustrators, photographers, practicing and exhibiting artists/craftspeople, graphic designers, fabric designers, and antique dealers. A number of our graduates have opted to go on for advanced degrees in art, particularly the Master of Fine Arts degree. These graduates are practicing and exhibiting artists, and some teach at colleges and universities. Students are well prepared for their careers.

## Cooperative Art Programs

A cooperative program has been established between Shippensburg University and the Art Institutes International, which are the Art Institute of Pittsburgh, the Art Institute of Philadelphia, and six additional Art Institutes in Houston and Dallas, Texas; Ft. Lauderdale, Florida; Atlanta, Georgia; and Seattle, Washington. This plan is for students interested in pursuing specialized careers in commercial art who also want the advantage of an academic degree. Under this program students may select a junior year optional program in either visual communications, interior design, photography/multimedia or computer animation/multimedia, and then return to Shippensburg University for their senior year.

Art majors at Shippensburg University who wish to enroll in the junior year option at one of the Art Institutes must have junior status and have completed all foundation courses and other required art course work.

Following the completion of one of the above junior year options, students would return to Shippensburg University to complete the senior year of their program. Students electing to enroll in one of these options would, in addition to the 30 credit hours of specialized instruction completed at one of the Art Institutes, also complete all specifically required art courses at Shippensburg (37 credit hours: 22 credit hours of required art courses and 15 credit hours of unrestricted art electives), the prescribed distribution of general education courses (48 credit hours), plus 5 credit hours of free electives at Shippensburg University. The total number of hours required for graduation would remain at 120. Junior option courses would be accepted for transfer upon receipt of an official transcript from the Art Institute (only C grades or above will transfer).

There is also a reciprocal agreement for graduates of an Art Institute. Any student from one of the Art Institutes who has successfully completed a two-year program in either visual communication, interior design,

photography/multimedia, or computer animation/multimedia would be accepted into the baccalaureate degree program in art at Shippensburg University. Art Institute graduates would be accepted with 45 credit hours of transferred credits, with C grades or better, applicable toward the 120 credits required for graduation. These students would complete 19 credit hours of art (as determined by the associate dean of the College of Arts and Sciences and the chair of the Department of Art and Design) and 48 credit hours of general education course work as required for graduation and 8 credits of free electives.

A visiting student program has been established between Shippensburg University and the Fashion Institute of Technology of New York City, N.Y. This program offers art majors the opportunity to take courses at FIT in order to supplement the art program at Shippensburg University without the necessity of a formal transfer. The areas in which art majors may apply are fashion design, advertising design, textile/surface design, and accessories design. The same policy of transfer credits applies as with the Art Institute previously stated.

## **Bachelor of Arts**

### **Art, B.A.**

#### **Requirements for the Art Major - 39 crs.**

The art major program for a B.A. in art consists of basic core courses plus a selected concentration, which may be fine arts, history, or studio. Please note that some courses are only offered in the fall or spring. Students should plan their schedules accordingly and with care. All art majors are required to take the following courses:

#### **Foundation Courses (12 crs.)**

(Taken during first year of program)

- ART 101 - Art Appreciation Credits: 3
- ART 110 - Basic Drawing Credits: 3
- ART 215 - Color and Two-Dimensional Design Credits: 3 offered in fall only
- ART 218 - Three-Dimensional Design Credits: 3 offered in spring only

#### **Additional Foundation Courses (12 crs.)**

- ART 210 - Drawing II Credits: 3
- ART 232 - Art History II Credits: 3 offered in fall only
- ART 233 - Art History III Credits: 3 offered in spring only
- ART 385 - Senior Art Seminar Credits: 3 (One year sequential course which begins in the fall; students may not enter mid-year.)

#### **Art Electives (15 crs.)**

All art majors also must elect five courses (15 crs.) or six courses (18 crs.) if ART 101, ART 232, or ART 233 is taken as a general education elective in Category B of the General Elective credits required by Shippensburg University. Not all courses are offered every semester. Students should check with their advisor to learn the sequence of courses and the general education courses required for their major as they develop their four-year plan. Four of the six electives must be 300 level or higher. Courses are selected from the following list:

- ART 211 - Figure Drawing Credits: 3 offered in 'even' year fall only
- ART 217 - Computer Design I Credits: 3
- ART 231 - Art History I Credits: 3 offered in 'even' year fall only
- ART 300 - Independent Studio/Ceramics Credits: 3
- ART 301 - Independent Studio/Drawing Credits: 3
- ART 302 - Independent Studio/Enameling Credits: 3
- ART 303 - Independent Studio/Painting Credits: 3
- ART 304 - Independent Studio/Sculpture Credits: 3
- ART 305 - Independent Studio /Computer Design Credits: 3
- ART 306 - Computer Design II Credits: 3 offered in spring only
- ART 309 - Independent Studio Credits: 3
- ART 319 - Computer Design III Credits: 3 offered in spring only
- ART 321 - Watercolor I Credits: 3 offered in spring only
- ART 322 - Watercolor II Credits: 3 offered in fall only
- ART 326 - Painting I Credits: 3 offered in fall only
- ART 327 - Painting II Credits: 3 offered in spring only
- ART 337 - Printmaking I Credits: 3
- ART 339 - History of American Art Credits: 3 offered in 'even' year fall only
- ART 340 - Ceramics Credits: 3 offered in fall only
- ART 341 - Advanced Ceramics Credits: 3 offered in spring only
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 offered in fall only
- ART 393 - Selected Topics in Art Credits: 1-3
- ART 395 - Internship in Art I Credits: 3
- ART 399 - Independent Study Credits: 3
- ART 400 - Contemporary Methods in Art Education Credits: 3
- ART 425 - Computer Design IV Credits: 3 offered in spring only
- ART 430 - Computer Design V Credits: 3
- ART 435 - Computer Design VI Credits: 3 offered in spring only
- ART 490 - Selected Topics in Art Credits: 1-3

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

## **Art Education Certification, B.A.**

In addition to the 24 credits of foundation courses listed under the Art (B.A.), the following are required courses for the Art Education Certification program, including the College of Education and Human Services required courses for Pennsylvania Certification, K-12.

## Note:



All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Required Art Courses

- ART 217 - Computer Design I Credits: 3
- ART 326 - Painting I Credits: 3 offered in fall only
- ART 340 - Ceramics Credits: 3
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 offered in fall only
- ART 400 - Contemporary Methods in Art Education Credits: 3

## Required General Education Courses

Students are required to complete the following courses as part of their general education requirements:

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- PSY 101 - General Psychology Credits: 3
- Students must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ).

## Required College of Education and Human Services courses

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15  
(*Students in the K-12 Art Certification program will take 12 crs. of EDU 495* )

### Note:

Students must also take the Praxis I and II Examinations and complete all Pennsylvania Certification requirements to earn K-12 certification from the Pennsylvania Department of Education (PDE).

## Certificate

### Graphic Design Certificate

#### Required Courses (18 crs.)

- ART 217 - Computer Design I Credits: 3

- ART 306 - Computer Design II Credits: 3 offered in spring only
- ART 319 - Computer Design III Credits: 3 offered in fall only
- ART 425 - Computer Design IV Credits: 3 offered in spring only
- ART 430 - Computer Design V Credits: 3 offered in fall only
- ART 435 - Computer Design VI Credits: 3 offered in spring only

## Minor

### Art Minor

21 crs.

#### Foundation Courses (9 crs.)

- ART 110 - Basic Drawing Credits: 3
- ART 215 - Color and Two-Dimensional Design Credits: 3 Offered in fall only
- ART 218 - Three-Dimensional Design Credits: 3 Offered in spring only

#### Art History Elective (3 crs.)

- ART 231 - Art History I Credits: 3 Offered in 'even year' fall only
- ART 232 - Art History II Credits: 3 Offered in fall only
- ART 233 - Art History III Credits: 3 Offered in spring only
- ART 339 - History of American Art Credits: 3

#### Art Electives (9 crs.)

At least 6 credits must be 300/400 level courses.

- ART 210 - Drawing II Credits: 3
- ART 211 - Figure Drawing Credits: 3
- ART 217 - Computer Design I Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 300 - Independent Studio/Ceramics Credits: 3
- ART 301 - Independent Studio/Drawing Credits: 3
- ART 302 - Independent Studio/Enameling Credits: 3
- ART 303 - Independent Studio/Painting Credits: 3
- ART 304 - Independent Studio/Sculpture Credits: 3
- ART 305 - Independent Studio /Computer Design Credits: 3
- ART 306 - Computer Design II Credits: 3 Offered in spring only
- ART 309 - Independent Studio Credits: 3
- ART 319 - Computer Design III Credits: 3 Offered in fall only
- ART 321 - Watercolor I Credits: 3 Offered in spring only
- ART 322 - Watercolor II Credits: 3 Offered in fall only
- ART 326 - Painting I Credits: 3 Offered in fall only

- ART 327 - Painting II Credits: 3 Offered in spring only
- ART 340 - Ceramics Credits: 3
- ART 341 - Advanced Ceramics Credits: 3 Offered in spring only
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 Offered in fall only
- ART 393 - Selected Topics in Art Credits: 1-3
- ART 395 - Internship in Art I Credits: 3
- ART 399 - Independent Study Credits: 3
- ART 400 - Contemporary Methods in Art Education Credits: 3
- ART 425 - Computer Design IV Credits: 3 Offered in spring only
- ART 430 - Computer Design V Credits: 3 Offered in fall only
- ART 435 - Computer Design VI Credits: 3 Offered in spring only
- ART 490 - Selected Topics in Art Credits: 1-3

## **Biology Department**

The Department of Biology offers undergraduate programs leading to the Bachelor of Science degree in Biology with concentrations in health professions, ecology and environmental biology, biotechnology, clinical sciences and secondary education certification. The undergraduate program in biology is designed to provide students with a comprehensive foundation in life science, including experience with both theoretical and practical aspects of the discipline. Students will develop an understanding of significant core areas, including genetics, cellular biology, physiology, ecology, and organismal biology. In addition to the core curriculum, students may choose from a broad selection of courses that focus intensely on the various biological sub-disciplines. The program features exposure to the biological sciences through experiences in a combination of classroom, laboratory, and field studies. Studies in cognate areas such as chemistry, mathematics, and physics are an integral and significant component of contemporary biological education.

## **Biology Features**

In addition to earning a Bachelor of Science (B.S.) degree in biology, students may choose to gain specialized training in one of the following concentrations: biotechnology (with a pre-forensics option), clinical sciences, ecology and environmental biology, health professions, and secondary education certification (with an environmental education certification option). As the cornerstone of the biology department, our faculty is concerned about instruction and our students. In addition to small classes taught by highly trained professors with expertise in their fields, we also offer the opportunity to participate directly in research with faculty members. Students may receive small research grants from the Shippensburg University Foundation to purchase supplies or to help defray the cost of attending professional meetings. Students are assigned a faculty advisor from the department to help guide them in course selection and career goals. Numerous opportunities exist for students to engage in internship experiences off campus. Students with an interest in marine science may enroll in summer courses through our affiliation with the Chincoteague Bay Field Station at Wallops Island, Virginia. Beta Beta Beta Biological Honor Society, the Biology Club, and the Health Sciences Club provide opportunities for service, learning, and recreation.

## **Biology Career Opportunities**

Undergraduate degree programs in the Department of Biology make possible a multitude of career options. Students with an interest in a career in the health fields may enter professional schools to train for careers in medicine, veterinary science, optometry, dentistry, podiatry, chiropractic, physical therapy, or pharmacy. The clinical sciences concentration allows students to incorporate their clinical education in medical technology, histotechnology, cytotechnology or

respiratory therapy as their fourth year of undergraduate studies. Students with an interest in field studies and the environment can consider careers or graduate programs in conservation, wildlife biology, fisheries management, forestry, and ecology. Industries and pharmaceutical companies recruit students with a background in cell biology, microbiology, and biotechnology. Students who earn secondary education certification begin professions as secondary school teachers. Careers in clinical or academic research, college teaching, and other specialized fields usually require master's or doctoral-level degrees.

## Chincoteague Bay Field Station

Shippensburg University is a charter member of the Chincoteague Bay Field Station, a joint venture with a number of the other Pennsylvania State System of Higher Education universities and several colleges and universities of neighboring states. The field station operates at Wallops Island, Virginia, for field and laboratory studies in marine sciences. An assortment of small boats provides a wide range of teaching and research capabilities. A laboratory, dormitory, dining facilities, and a full-time permanent staff are a part of the station. Four separate three-week sessions operate during the summer months with a variety of courses taught during each session by faculty from the member institutions. In addition, the station facilities are available for class field trips or weekend trips during the fall and spring. Students interested in these courses should contact the Shippensburg director of the Chincoteague Bay Field Station or visit [www.cbfieldstation.org](http://www.cbfieldstation.org).

The following courses and others are offered regularly during the summer at the station:

- Field Methods of Oceanography
- Marine Biology
- Marine Invertebrates
- Marine Ecology
- Marine Ichthyology
- Marine Mammals
- Coastal Herpetology
- Coastal Ornithology
- Behavior of Marine Organisms
- Ecology of Marine Plankton
- Problems in Marine Sciences

## Bachelor of Science

### Biology, B.S.

#### Requirements

Students enrolled in a program of studies leading to the Bachelor of Science degree will fulfill the following requirements:

#### Biology Core Courses (13 crs.)

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Upper Division Electives (13-14 crs.)

### Ecology/Evolution Elective:

- BIO 242 - Ecology Credits: 3 or
- BIO 430 - Principles of Evolution Credits: 3

### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4

### Organismal Elective:

- BIO 230 - Botany Credits: 3 or
- BIO 317 - Parasitology Credits: 3 or
- BIO 362 - Invertebrate Zoology Credits: 3 or
- BIO 363 - Vertebrate Zoology Credits: 3

### Cellular Elective:

- BIO 220 - Microbiology Credits: 4 or
- BIO 385 - Cell Biology Credits: 3

## Additional Biology Electives (14-15 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

## Allied Fields (32 crs.)

### Mathematics

MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
  
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- Additional courses in biology, allied fields or other areas related to the major may be chosen with advisement

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology, Biotechnology Concentration, B.S.**

Biotechnology is a collection of techniques that uses living organisms or substances from those organisms for specific applications. Individuals with training in biotechnology can work in a variety of jobs in industrial, government, and academic settings. These careers may be in research, product development, production, quality control, technical writing, sales, education, or administration. Students in the biology program at Shippensburg University may choose the concentration in biotechnology. Students enrolled in this program will obtain a broad background in biology, chemistry, and physics as well as gain substantial biotechnology laboratory experience that includes the cloning and manipulation of DNA, immunochemical analyses, and cell culture. Students interested in pre-forensics should take 7-8 credits of suggested Criminal Justice courses.

Students in the biotechnology concentration must maintain at least a 2.5 QPA in their major and overall program through graduation. Students who are withdrawn from this concentration because their QPA has fallen below the minimum 2.5 may reapply when they attain the minimum QPA.

## **Biology Core Courses (25 crs.)**

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

- BIO 230 - Botany Credits: 3
- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 418 - Molecular Biology Credits: 3
- BIO 461 - Techniques in Biotechnology Credits: 3
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Upper Division Electives (7 crs.)

### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4

### Experiential Elective

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- or
- BIO 391 - Biology Internship I Credits: 1-3
- BIO 392 - Biology Internship II Credits: 1-3

## Additional Biology Electives (9 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

### Strongly Recommended Electives:

- BIO 220 - Microbiology Credits: 4
- BIO 324 - Pathogenic Microbiology Credits: 3
- BIO 371 - Human Anatomy Credits: 4
- BIO 408 - Principles of Virology Credits: 3
- BIO 409 - Immunology Credits: 3

## Allied Fields (38-39 crs.)

### Mathematics

MAT 221 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3
- OR

- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- CHM 301 - Biochemistry I Credits: 3
- CHM 371 - Analytical Chemistry Credits: 4 or
- CHM 420 - Biochemistry II Credits: 3

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology, Clinical Sciences Concentration, B.S.**

The Clinical Sciences concentration enables students who are interested in Medical Technology, Histotechnology, Cytotechnology or Respiratory Therapy to include their clinical training as part of their B.S. in Biology degree requirements. Students in this concentration may enter a clinical program in medical technology (aka: medical laboratory science), histotechnology, cytotechnology, or respiratory therapy after their junior year of college and then transfer credits back to Shippensburg University following successful completion of their clinical education. An overall GPA of at least 2.5 is required to be eligible for this concentration and application to clinical sites is required one year in advance of the professional program starting date. Credits from the clinical year will be used to meet remaining elective requirements for Biology in addition to meeting "free electives" to complete the B.S. in Biology degree.

The clinical year may be taken at any of the hospital schools affiliated with Shippensburg University or any other hospital program accredited by the National Accrediting Agency for Clinical Laboratory Science. Although hospitals give preference to their affiliates, admission is on a competitive basis and Shippensburg University cannot guarantee admission to a hospital program for the clinical year.

The following is a list of current hospital affiliations for Shippensburg University (or non-affiliated but approved sites):



## Medical Technology

- Altoona Hospital, Augusta Health (Fishersville, VA)
- Conemaugh Memorial Medical Center (Johnstown, PA)
- Pennsylvania College of Health Sciences
- Reading Medical Center
- Rockingham Memorial Hospital (Harrisonburg, VA)
- Saint Vincent Health Center (Erie, PA)
- Williamsport Hospital Histotechnology
- York Hospital

## Histotechnology

- Conemaugh Memorial Medical Center (Johnstown, PA)

## Cytotechnology

- Thomas Jefferson University (Philadelphia, PA)
- Magee Women's Hospital (Pittsburgh, PA; non-affiliate)

## Respiratory Therapy

- Lancaster Regional Medical Center (via Millersville University)

## Biology Core Courses (24 crs.)

Students must earn at least a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 220 - Microbiology Credits: 4
- BIO 260 - Genetics Credits: 4
- BIO 350 - Human Physiology Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 300 - Careers in the Health Professions Credits: 1

## Additional Biology Electives

(Must take at least 7 additional Biology elective credits; see below). Specific electives to meet Clinical Sciences concentration requirements.

Please note only 3 credits of research may count as biology electives. Credits in excess of that number count as free electives.

## Medical Technology

### Required:

- BIO 324 - Pathogenic Microbiology Credits: 3
- BIO 374 - Hematology Credits: 2
- BIO 409 - Immunology Credits: 3

### Also recommended:

- BIO 317 - Parasitology Credits: 3
- BIO 418 - Molecular Biology Credits: 3

## Histotechnology

### Required:

- BIO 371 - Human Anatomy Credits: 4
- BIO 375 - Histology Credits: 3

## Cytotechnology

### Recommended:

- BIO 371 - Human Anatomy Credits: 4
- BIO 418 - Molecular Biology Credits: 3

## Respiratory Therapy

### Required:

- BIO 371 - Human Anatomy Credits: 4

### Also recommended:

- BIO 409 - Immunology Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3

## Allied Fields (32 crs.)

## Mathematics

Students unable to start at the level of MAT 211 Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology, Ecology and Environmental Biology Concentration, B.S.**

Students interested in ecological and environmental fields may choose the ecology and environmental biology concentration within the biology program. Students enrolled in this program will fulfill the following requirements:

### **Biology Core Courses (19 crs.)**

Students must earn at least a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3

- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Upper Division Electives (19-20 crs.)

### Physiology Elective (4 crs.)

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4

### Ecology and Conservation Electives (9 crs.)

Choose any 3:

- BIO 362 - Invertebrate Zoology Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 406 - Mammalogy Credits: 3
- BIO 412 - Ichthyology Credits: 3
- BIO 417 - Herpetology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Cellular Elective (3-4 crs.)

- BIO 220 - Microbiology Credits: 4 or
- BIO 385 - Cell Biology Credits: 3

### Experiential Elective (3 crs.)

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- or
- BIO 391 - Biology Internship I Credits: 1-3
- BIO 392 - Biology Internship II Credits: 1-3

### Additional Biology Electives (2-3 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

### Allied Fields (35 crs.)

## Geography-Earth Science

Choose one of the following courses:

- ESS 110 - Introduction to Geology Credits: 3
- ESS 210 - Physical Geology Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3

## Mathematics

Students unable to start at the level of MAT 211 - Calculus I Credits: 4 will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
  
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

# Biology, Health Professions Concentration, B.S.

Students in biology may pursue studies in a number of health sciences including pre-medicine, pre-dentistry, pre-optometry, pre-podiatry, pre-veterinary medicine, pre-pharmacy, pre-chiropractic, and pre-physical therapy. The Health Professions Committee, consisting of members of the Biology and Chemistry departments, provides students with advisement on such matters as course selection, professional school admission test information, and professional school interviews. Health professions-oriented students are encouraged to join the Health Sciences Club. This organization hosts professional program representatives and health care practitioners who discuss admissions procedures and criteria and career opportunities.

Shippensburg University Health Professions Committee Policy regarding support of pre-professional health science applicants is as follows:

The Health Professions Committee, comprised of faculty members from the biology and chemistry departments, provides students who are applying to medical, dental, optometry, podiatric, and veterinary medical programs practice interviews and committee letters of recommendation to support their applications. These particular disciplines are identified because admissions committees for these programs prefer committee letters of reference in lieu of individual reference letters. Students applying to other health professional programs will obtain individual letters of reference as required for their professional school applications.

The policy of the Shippensburg University Health Professions Committee requires a minimum 3.2 cumulative QPA (medical, dental, veterinary applicants) or 3.0 cumulative QPA (optometry, podiatric applicants) in order for a student to be granted a practice interview and committee letter. For transfer students, at least two semesters must be completed at Shippensburg University before a committee interview and letter will be provided. This minimum QPA requirement is based on the past history of success for former students and the recommendations set forth by professional programs. However, this requirement does not imply these minimum QPAs will be competitive for successful application.

Students should seek counsel from their pre-health advisor regarding the suitability of their qualifications for their desired program of study prior to requesting a committee interview and letter. Committee interviews are typically conducted in mid-April and requests for interviews should be made to the primary health science advisor prior to April 1 of the application year.

## Affiliations

Shippensburg University has several agreements with health professional schools that enable qualified and motivated students to enter a professional program before they complete their requirements for the baccalaureate degree. If students complete at least 90 credits of specific course work (with advisement), Shippensburg University will accept credits transferred from the affiliated program after students complete their first professional year. Students are then awarded a B.S. in biology. Though admission is not guaranteed, the programs do give Shippensburg University students preferred consideration for admission. Accelerated articulation agreements exist with:

- Philadelphia College of Osteopathic Medicine
- Salus University - College of Optometry
- Temple University School of Podiatric Medicine
- Temple University School of Dentistry
- New York Chiropractic College
- Logan Chiropractic College
- Thomas Jefferson University - Jefferson College of Health Professions

An articulation program also exists with Arcadia University's Physician Assistant master's degree program.

The Thomas Jefferson University College of Health Professions affiliation enables students to pursue undergraduate degrees in radiologic sciences, biotechnology, cytotechnology and nursing, a master's degree in occupational therapy, and a doctoral degree in physical therapy. Students complete two or three years of specific course work at Shippensburg University prior to being admitted to Thomas Jefferson University for the professional portion of their program.

Students in the health professions concentration must maintain at least a 2.8 QPA in their major and overall program through graduation. Students who are withdrawn from the health professions track because their QPA has fallen below the 2.8 minimum may reapply when they regain the minimum QPA.

## Biology Core Courses (17 crs.)

Students must earn a "C" or better in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 220 - Microbiology Credits: 4
- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Upper Division Electives (13-14 crs.)

### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4 (required for pre-physical therapy students.)

### Anatomy Elective:

- BIO 370 - Comparative Vertebrate Anatomy Credits: 4 or
- BIO 371 - Human Anatomy Credits: 4 (required for pre-physical therapy students.) or
- BIO 375 - Histology Credits: 3

### Molecular/Cellular Elective:

- BIO 385 - Cell Biology Credits: 3 or
- BIO 418 - Molecular Biology Credits: 3

### Breadth Elective: Choose One

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 330 - Animal Behavior Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 412 - Ichthyology Credits: 3

- BIO 417 - Herpetology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3

## Additional Biology Electives (10-11 crs.)

Electives should be selected with advisement. Certain professional schools may have specific requirements.

BIO 300 - Careers in the Health Professions Credits: 1 (strongly recommended)

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

## Allied Fields (31-34 crs.)

### Mathematics

MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

### Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

### Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4 or
- CHM 222 - Modern Organic Chemistry II Credits: 3 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.  
and



- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.  
and
- CHM 301 - Biochemistry I Credits: 3 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology with Secondary Certification, B.S.**

Students enrolled in a program of studies leading to the Bachelor of Science degree with secondary certification will fulfill the following requirements:

### **Biology Core Courses (25 crs.)**

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3
- BIO 499 - Capstone Seminar in Biology Credits: 1

### **Physiology Elective (4 crs.)**

- BIO 350 - Human Physiology Credits: 4 or
- BIO 351 - Animal Physiology Credits: 4

### **Additional Biology Electives (9 crs.)**

Electives should be selected with advisement. Biology credits should total at least 38.

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

### **Allied Fields (24 crs.)**

### **Mathematics**

*MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.*

- MAT 117 - Applied Statistics Credits: 3
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## (Not required but strongly recommended)

- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4

## Prescribed General Education Course (3 crs.)

Students must complete the following course as part of their general education requirements:

- PSY 101 - General Psychology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## Note:

Students seeking certification in secondary education are also required to complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ).

## Minor

### Biology Minor

19 crs.

#### Required (8 crs.)

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

#### Electives (11 crs.)

Electives are to be selected from courses intended for biology majors. At least two 3 credit-hour courses must be at the 300-level or above. BIO 237 , BIO 238 , seminar, internship, and research cannot be used to meet requirements for the minor.

## Certification

### Environmental Education Certification

Shippensburg University offers an approved program in environmental education. The program may be taken by elementary education majors as an academic sequence or by secondary education majors in biology or geography/earth science. Secondary students in other fields may enroll in the program with the permission of their department chair.

The environmental education program at Shippensburg is a somewhat structured program, but it also allows for much diversity in the selection of courses for the completion of the requirements for certification. Certification allows the teacher to instruct any subject matter that is labeled as environmental education in any grade from kindergarten through the 12th grade.

To receive the certification a student must complete a minimum of 24 credits from the courses described below. The only course which is required of all students is EDU 410 - Environmental Education Practicum Credits: 3.

The practicum is offered during fall semester of odd numbered years and summers during even numbered years.

The additional 21 credits may be selected in a variety of ways. Among the 21 credits, a minimum of 12 credits must be selected from core courses and 9 credits must be selected from courses outside of the student's major field of study. These 21 credits must be selected from a minimum of three departments of the university and include a statistics course.

24 crs.

## Required Course

- EDU 410 - Environmental Education Practicum Credits: 3

## Core Courses (12 crs. minimum)

The student must select a minimum of one course from each of the four categories (A-D) below. Additional courses may be counted toward Related Electives.

### Category A

- BIO 142 - Introduction to Ecology Credits: 3
- BIO 242 - Ecology Credits: 3

### Category B

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Category C

- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3

### Category D

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3

## Related Electives

Any remaining credits must be selected from the courses listed below. It is recommended students take as broad a base of courses as possible if they have a strength in one of the science areas. If an area of strength is not evident, it is recommended that the remaining electives be used to establish one.

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
- BIO 205 - Marine Biology Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 245 - Marine Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- BIO 362 - Invertebrate Zoology Credits: 3

- BIO 363 - Vertebrate Zoology Credits: 3
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- ECO 310 - Public Finance Credits: 3
- ECO 340 - Introduction to Regional Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 371 - Public Management Credits: 3
- MAT 117 - Applied Statistics Credits: 3

#### Note:

BIO 205, BIO 245, BIO 446 are offered at the Marine Science Consortium, Wallops Island, Virginia.

A student should normally indicate interest in receiving the certification early in his/her undergraduate studies. This interest should be communicated to his/her advisor or department chair so a suitable program can be planned which will allow the student to complete the requirements within a normal four-year program. Students and advisors are urged to consult the catalog for any prerequisites for courses above the 100 levels.

## General Science Certification

Students completing the requirements leading to certification as a secondary school teacher may elect to satisfy the requirements for additional certification in General Science by completing the following requirements:

### Biology (9 crs.)

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 145 - Environmental Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Chemistry (8 crs.)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

## Physics (9 crs.)

- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 122 - Introductory Physics II - Lecture Credits: 3

## Mathematics (8 crs.)

- MAT 117 - Applied Statistics Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## Computer Science (3 crs.)

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- EDU 420 - Microcomputers in the Classroom Credits: 3

## Earth-Space Science (3 crs.)

- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3
- ESS 212 - Historical Geology Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3

# Chemistry and Biochemistry Department

The Department of Chemistry offers undergraduate programs leading to the Bachelor of Science degree with programs in chemistry and the following concentrations: chemistry-biochemistry, chemistry-pre-pharmacy, chemistry-forensics, and certification as a secondary school teacher. The major in chemistry is designed to provide students with a thorough grounding in the fundamental areas of the discipline. Within the core curriculum, students will receive a solid foundation in the basic areas of inorganic, organic, biochemical, physical, and analytical/instrumental chemistry. In addition to this core curriculum, individuals can choose from a selection of elective courses intended to develop a deeper understanding of specific areas. The course of study weaves the theoretical and experimental aspects of chemistry through a series of laboratory courses designed to augment classroom work.

## Chemistry Features

The chemistry program is certified by the American Chemical Society (ACS). The chemistry major allows for a B.S. as well as concentrations in biochemistry, pre-pharmacy, forensics. Students desiring admission to medical, dental, veterinary or other professional schools post graduation are encouraged to consider the biochemistry concentration. Opportunities exist for undergraduate research projects under the direction of individual professors. A research experience during the senior year is strongly encouraged and supported. Students desiring certification by the American Chemical Society must complete the required core curriculum and in addition take two credits in Introduction to Research and one credit in Chemistry Seminar. All chemistry majors take a comprehensive exam after completion of their junior year.

## **Chemistry Career Opportunities**

The degree in chemistry affords a variety of career opportunities. It allows students to enter the fields of industry, government, teaching, or advanced study in professional or graduate schools. Industrial or business employment generally involves laboratory testing and research with energy, petrochemical, pharmaceutical, environmental analysis, or agricultural chemical companies. Government agencies such as the Environmental Protection Agency, Department of Agriculture, National Institutes of Health, or law enforcement agencies require chemists for entry level positions. Additionally, there is a strong demand for science teachers in the secondary schools. Chemistry graduates have access to postgraduate programs at major universities. Professional and graduate degrees lead to careers in medicine, dentistry, other health related professions, or to careers in clinical or academic research.

## **ACS Certification**

Shippensburg University offers a program of study in chemistry approved by the American Chemical Society (ACS). This program is designed for students who plan technical careers in industry or government or graduate work in chemistry. All concentrations within the Chemistry B.S. are eligible for ACS certification if all requirements described in this section are met. Any student desiring departmental recommendation for graduate work and certification by the ACS should satisfactorily complete the following chemistry courses: CHM 121, CHM 122, CHM 123, CHM 124, CHM 221, CHM 222, CHM 223, CHM 224, CHM 301, CHM 324, CHM 363, CHM 364, CHM 371, CHM 381, and CHM 4XX (any 400-level course), 2 credits in CHM 496 Introduction to Research I/CHM 497 Introduction to Research II and 1 credit in CHM 312 Chemistry Seminar. Additional requirements are mathematics through MAT 212, a computer skills course meeting the requirements as specified by the department (CSC 103 does not satisfy this requirement), and eight hours of calculus-based physics. A foreign language is recommended but not required. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

## **Bachelor of Science**

### **Chemistry, B.S.**

Shippensburg University offers a program of study in chemistry approved by the American Chemical Society (ACS). This program is designed for students who seek technical careers in industry or government or graduate work in chemistry. Any student desiring departmental recommendation for graduate work and certification by the American Chemical Society should complete the department core curriculum and the following courses.

### **Chemistry Core Curriculum**

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester

of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

## Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Chemistry Core Curriculum and additional 9 credits in chemistry coursework listed below:

Choose one of the following chemistry seminar courses:

- CHM 312 - Chemistry Seminar Credits: 1
- CHM 313 - Chemistry Seminar Credits: 1
- CHM 314 - Chemistry Seminar Credits: 1
- CHM 315 - Chemistry Seminar Credits: 1
  
- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
  
- CHM 490 - Selected Topics in Chemistry Credits: 1-3 or
- CHM 420 - Biochemistry II Credits: 3
  
- CHM 481 - Advanced Inorganic Chemistry Credits: 4



## Allied Fields (4 crs.)

Arts and sciences students majoring in chemistry must take the following courses in allied fields.

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1

## Chemistry, Biochemistry Concentration, B.S.

Biochemistry is the study of chemistry focused on living organisms. The biochemistry concentration is designed to prepare students for careers or graduate study in biochemistry and meets the recommended guidelines of both the American Society for Biochemistry and Molecular Biology and the American Chemical Society. The biochemistry curriculum also prepares students for application to medical, dental, and veterinary school. Students interested in completing the chemistry-biochemistry concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

## Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

## Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4

- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Biochemistry Concentration

Chemistry Core Curriculum and additional 7 credits in chemistry coursework listed below:

*CHM 496 or CHM 497 Introduction to Research 1 cr. [(biochemistry concentration students that desire ACS certification must complete a total of 3 credits in research)]*

- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
- CHM 420 - Biochemistry II Credits: 3
- CHM 421 - Biochemistry Laboratory Credits: 1
- CHM 496 - Introduction to Research I Credits: 1-3
- CHM 312 - Chemistry Seminar Credits: 1

Allied Fields Required (13-14 crs.)

- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 461 - Techniques in Biotechnology Credits: 3

(Choose 1 of the following) 3-4 crs.

- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- BIO 220 - Microbiology Credits: 4
- BIO 408 - Principles of Virology Credits: 3
- BIO 409 - Immunology Credits: 3

## Chemistry, Forensics Concentration, B.S.

The forensics concentration has a curriculum that includes the Chemistry B.S. with additional courses in biology and criminal justice to prepare a student for application to a masters program in forensic science. Ultimately, these students will be candidates for employment in the forensic chemistry field. Students interested in completing the chemistry-forensics concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

Students enrolled in the forensic concentration may apply for an internship at the Cumberland County District Attorney's Office Forensic Laboratory in Carlisle, PA. To be eligible for the internship students must have completed Organic Chemistry II, have a minimum QPA of 3.0, complete a background check and polygraph test at an interview.

Students who would like to graduate with ACS certification must take an additional 2 credits in research and CHM 312 - Chemistry Seminar Credits: 1.

## Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

### Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

### Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

### Allied Fields Required (16 crs.)

- CRJ 100 - Introduction to Criminal Justice Credits: 3
- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 336 - Introduction to Forensic Science Credits: 3
- CRJ 456 - Forensic Science: Evidence Analysis Credits: 3
- BIO 260 - Genetics Credits: 4

## Chemistry, Pre-Pharmacy Concentration, B.S.

The pre-pharmacy concentration includes a curriculum that prepares students for application to a doctorate in pharmacy (Pharm.D.) program while earning a B.S. in chemistry. The curriculum prepares students for transfer into the first of four professional years of pharmacy school after receiving their B.S. in chemistry from Shippensburg University. Students need not commit to the concentration until the end of their sophomore year. Course advisement will be used when considering the varied requirements of the Pennsylvania colleges of pharmacy; however, all students who opt for this concentration will easily satisfy the course requirements to apply to several pharmacy schools. In addition, students will be encouraged to shadow pharmacists in the area and to attend seminars within our department that will introduce the various jobs that pharmacists perform. The chemistry and biology curriculum requirements prepare students to successfully take the Pharmacy College Admissions Test (PCAT) exam.

Students interested in completing the chemistry-pre-pharmacy concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

The pre-pharmacy concentration is intended to prepare students who complete four years at Shippensburg University to apply for entrance to the third year of a six-year pharmacy program. Students intending to apply to a pharmacy school will be advised to take an additional 9-10 credits of free electives to specifically meet the pre-professional requirements of individual schools prior to matriculating. Before applying to any pharmacy school, students must take the Pharmacy College Admission Test (PCAT). A competitive score on the PCAT and QPA is required for acceptance into pharmacy school.

### Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

#### Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

#### Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Requirements

Chemistry Core Curriculum and additional 4-5 credits in chemistry coursework listed below:

- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1

Choose 1 of the following

- CHM 420 - Biochemistry II Credits: 3
- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- CHM 490 - Selected Topics in Chemistry Credits: 1-3

Allied Fields Required (11 crs.)

- MAT 117 - Applied Statistics Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 350 - Human Physiology Credits: 4 or
- BIO 371 - Human Anatomy Credits: 4

## Chemistry Secondary Certification, B.S.

Students interested in teaching chemistry in the state of Pennsylvania should enroll in the Chemistry Secondary Education Certification program. Students enrolled in a program of studies leading to the degree of Bachelor of Science with secondary certification will fulfill the chemistry core curriculum and the requirements listed below. Students are expected to graduate with a minimum QPA of 3.0 as required by the state of Pennsylvania for certification. Any student enrolled in chemistry-secondary education desiring the additional preparation for this program and certification by the American Chemical Society must complete the Chemistry- secondary education curriculum and the additional requirements specified under ACS certification.

Teacher Education students majoring in chemistry must take the chemistry core curriculum and the following courses in allied fields. Some of these may be taken as general education

Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1

- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Allied Fields (20 crs.)

Teacher Education students majoring in chemistry must take the following courses in allied fields. Some of these may be taken as general education.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Chemistry, Medical Sciences Concentration, B.S.

To enter into this concentration, students must have a GPA of 3.2. Students in this concentration must maintain a GPA of 3.2 or better.

Students that choose this concentration are not eligible for American Chemical Society Certification.

## Chemistry Requirements (34 crs.; 37 with General Education)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3 *counts towards General Education Category C requirement*
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 312 - Chemistry Seminar Credits: 1
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3
- CHM 420 - Biochemistry II Credits: 3
- CHM 496 - Introduction to Research I Credits: 1-3
- CHM 497 - Introduction to Research II Credits: 1-3

## Additional Biology Requirements (15 crs.)

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 260 - Genetics Credits: 4
  
- BIO 350 - Human Physiology Credits: 4  
OR
- BIO 351 - Animal Physiology Credits: 4
  
- BIO 385 - Cell Biology Credits: 3

## Physics Requirements (5 crs.; 8 crs. with General Education)

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3 *counts towards General Education Category C requirement*
- PHY 206 - Intermediate Physics II Credits: 3

## Restricted Electives (4 crs.)

Choose 1 or 2 courses, with advisement

- BIO 220 - Microbiology Credits: 4
- BIO 375 - Histology Credits: 3
- BIO 408 - Principles of Virology Credits: 3
- BIO 418 - Molecular Biology Credits: 3

- BIO 461 - Techniques in Biotechnology Credits: 3
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 421 - Biochemistry Laboratory Credits: 1

## Free Electives (11 crs.)

Students must complete 11 credits of free electives. Recommended free electives include the following:

- BIO 409 - Immunology Credits: 3
- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- CHM 490 - Selected Topics in Chemistry Credits: 1-3
- CSC 110 - Computer Science I - Lecture Credits: 3
- SOC 369 - Medical Sociology Credits: 3

## Minor

### Biochemistry Minor

#### Required (24/28 crs.)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1 or
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3 or
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1 or
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3 or
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- CHM 301 - Biochemistry I Credits: 3
- CHM 420 - Biochemistry II Credits: 3
- CHM 421 - Biochemistry Laboratory Credits: 1
- CHM 496 - Introduction to Research I Credits: 1-3



## Chemistry Minor

### Required (23-27 crs.)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1 or
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3 or
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1 or
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3 or
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- 7 additional chemistry course credits at the 300 or 400 level

## Media/Journalism/Public Relations Department

The Department of Communication/Journalism offers an undergraduate program leading to a Bachelor of Arts degree with a major in communication/journalism. The goal of the department is to help students investigate communications and the many related careers available to the individual who has both a liberal arts and science background and a solid grounding in communications studies. The program provides students with skill and theory courses in three professional emphasis areas-public relations, print media, and electronic media. Throughout an undergraduate's tenure, instruction in practical skills is meshed with concern for the student's continuing intellectual, conceptual, and professional development. Upon graduation, students are well qualified to obtain an entry-level position in mass communications or use their education as a base for advanced study in communications, law, or business.

## Communication/Journalism Features

The department offers classes with an average size of about 22 students. Students receive ample opportunity to learn and practice with digital technology used in the communications industry to develop competency in desktop publishing, web design, audio, video, and photography.

Campus organizations give students practical experience in the communications media:

- The Slate, campus weekly newspaper
- WSYC-FM, 24-hour campus radio station
- SUTV, campus television news station

- Cumberland, student yearbook
- Impel Group, public relations firm
- National Broadcasting Society chapter
- Public Relations Student Society of America chapter
- Society of Professional Journalists chapter

Opportunities for professional internships with local, regional, national, and international media and businesses are always available to qualified juniors and seniors. Although not departmentally required, students are urged to use the two available internship experiences during the academic year and/or summer as a necessary springboard to professional employment. The department maintains a computerized internship database to accommodate student searches for available opportunities.

## **Communication/Journalism Career Opportunities**

A career in communication/journalism offers the dynamic challenges of working in today's media: the excitement of breaking news and events, the opportunity to meet and work with distinguished leaders and performers, and the satisfaction of being creative in your day-to-day work. Key employers are mass media: newspapers, radio, television, magazines, publishers, and online communicators. There are also public relations opportunities in industry and the professions, in government at all levels, and among non-profit institutions. Practitioners often move from the creative side of the business to media or organizational administration and management.

## **Admission Requirements**

SU students wishing to transfer into the Department of Communication/Journalism need a 2.3 cumulative QPA. Students will be admitted based on the above criteria and space availability in the professional emphasis the student selects.

## **Bachelor of Arts**

### **Communication/Journalism, Electronic Media Concentration, B.A.**

The electronic media professional emphasis prepares students for careers working in television, radio, cable, web streaming and video production. In addition to being able to take professional classes in areas like electronic news gathering, studio and remote field production, sports journalism, media advertising, and on-air producing and performance, students benefit from hands-on experience through WSYC-FM and SUTV, our student-run radio and television stations, and two professional internship opportunities.

#### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

**42 crs.**

All majors must take 42 credits in the Communication/Journalism major to graduate.

The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

## Theory and Writing Core (15 crs.)

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3

## Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

### Note:

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Electronic Media

- COM 224 - Electronic Media Writing Credits: 3
- COM 284 - Electronic Media Basic Production Credits: 3
- COM 424 - Electronic Media Producing and Performance Credits: 3
- COM 484 - Electronic Media Programming and Management Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

## The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3
- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3
- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

### Note:

COM 395 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## **Communication/Journalism, Print and Online Media Concentration, B.A.**

The Print & Online Media Professional Emphasis focuses on reporting and writing across a variety of styles and platforms, including breaking news, enterprise journalism and features. These stories are reported and produced using words, video, audio, graphics and various digital applications. The program of study prepares students for jobs in online media outlets and print publications such as newspapers and magazines.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

**42 crs.**

All majors must take 42 credits in the Communication/Journalism major to graduate.

The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

**Theory and Writing Core (15 crs.)**

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3

Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

**Note:**

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Print Media

- COM 285 - News Writing and Reporting Credits: 3
- COM 293 - Editing Credits: 3
- COM 375 - Public Affairs Reporting Credits: 3
- COM 478 - Digital Journalism Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

## The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3

- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3
- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

**Note:**

COM 396 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## **Communication/Journalism, Public Relations Concentration, B.A.**

The public relations professional emphasis prepares students for careers working in media relations, public affairs and digital strategic communications. The department offers a wide range of PR classes that not only teach students how to research, create, design and implement strategic communication plans and campaigns, but also how to use social media effectively in commercial, non-profit and governmental environments. Students have the opportunity to get involved in the PR departments of our student media groups and to join and lead our chapter of the Public Relations Student Society of America (PRSSA), a network of more than 11,000 students across the nation who study and practice professional public relations for real-world clients.

**Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

### **42 crs.**

All majors must take 42 credits in the Communication/Journalism major to graduate.

The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

### **Theory and Writing Core (15 crs.)**

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3

- COM 245 - Diversity and the Media Credits: 3

Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

**Note:**

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Public Relations

- COM 201 - Principles of Public Relations Credits: 3
- COM 241 - Public Relations Writing Credits: 3
- COM 381 - Promotional Publication Design Credits: 3
- COM 432 - Public Relations Research and Campaigns Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

## The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3
- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3

- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

**Note:**

COM 396 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## **Minor**

### **Communication/Journalism Minor**

18 crs.

#### **Required Core Courses (12 crs.)**

Students must have Jr standing to take COM 345.

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- COM 345 - Communication Law and Ethics Credits: 3

#### **Elective Courses (6 crs.)**

Students enrolled in the minor may take any two 200-400 level COM courses with approval of Communication/Journalism faculty advisor.

**Note:**

The Department of Communication/Journalism does not permit **any** transfer courses to be counted toward fulfillment of minor requirements.

## **Computer Science and Engineering Department**

The Department of Computer Science and Engineering offers an undergraduate program leading to a Bachelor of Science degree in computer science, Bachelor of Science degree in computer engineering, and a Bachelor of Science degree in software engineering.

## **Languages**



At Shippensburg University, the study of computer science, computer engineering, and software engineering as intellectual disciplines does not occur in a vacuum. Rather, study is oriented toward practical applications of computer science theory and methodology. As a result, the department feels part of its responsibility is to assist students in the concrete task of learning programming languages suitable for a variety of tasks.

Our introductory courses develop mastery in both Java and C so that our students are well-versed in both object-oriented and structured design. These languages are used in many courses throughout the remainder of the curriculum. In addition, all students will gain some knowledge of a variety of other languages (e.g., SQL in Database Management Systems).

## **Computer Science and Engineering Career Opportunities**

Career opportunities in hardware and software development as a programmer, engineer or systems analyst have been and are predicted to be very favorable. The work environment and income potential are highly attractive. Opportunities exist among all employers, especially business and industry, government, science, and education.

Internships and co-ops are available for students to gain practical experience, and students are highly encouraged to participate in them.

### **Bachelor of Science**

#### **Computer Engineering, B.S.**

Computer Engineering is a branch of engineering that combines software and electrical engineering to develop computer systems. Computer engineers are involved in the hardware development process, designing and building hardware systems; and they are involved in the software process, designing and building the operating systems and applications programs for those systems. These skills are vital for today's pervasive computing environment, where we are surrounded by systems built from discrete components, microcontrollers, embedded Systems-On-a-Chip, and reconfigurable logic devices.

The curriculum is designed to be a four-year, 120-credit-hour engineering program. The curriculum meets or exceeds national Computer Engineering academic standards. Generally, the curriculum requires 20 credits of computer engineering, 12 credits of computer science, 8 credits of elective/internship credit, 23 credits of mathematics, 20 credits of physics and engineering, and 39 credits of general education and basic science.

Students will learn how to program machines in a variety of languages, including C, Java, and Assembly languages; they will use CAD tools to design, build, and test printed circuit boards with microcontrollers, write software for their board, and integrate into existing systems; they will develop software for System-On-a-Chip systems using embedded operating systems and applications frameworks, they will build applications for mobile phones, and they will implement common algorithms on Digital Signals Processors; and they will use EDA tools to program reconfigurable FPGA devices for high-performance applications. Throughout this work, students will use sound engineering practices to guide their development processes.

### **Core Requirements**

#### **Engineering Core (12 crs.)**

- ENGR 100 - Engineering Seminar I Credits: 1

- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

## Physics (20 crs.)

- PHY 123 - Physics I Laboratory Credits: 1  
and
- PHY 205 - Intermediate Physics I Credits: 3  
OR
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 125 - Physics II Laboratory Credits: 1  
and
- PHY 206 - Intermediate Physics II Credits: 3  
OR
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 355 - Electronics Credits: 4

## Mathematics (23 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 322 - Differential Equations Credits: 3

## Computer Science and Engineering (32 crs.)

For the capstone experience, a student can take either CMPE 498 or CMPE 499.

- CMPE 220 - Computer Organization Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CMPE 322 - Microcontrollers & Interfaces Credits: 4
- CMPE 420 - Digital and Reconfigurable Computing Credits: 4
- CMPE 498 - Engineering Research Methods Credits: 2
- CMPE 499 - Engineering Design & Development Credits: 2
- CSC 431 - Computer Networks Credits: 4

## Electives (8 crs.)

8 credits of CMPE or ELEC courses at 300 level or higher, internship, or CS course with departmental approval.

- CS or Engineering Elective/Internship

# Computer Science, Computer Graphics Concentration, B.S.

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

## Core Requirements (47 crs.)

### Mathematics

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

### Computer Science

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

## Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1

- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

## Computer Graphics Concentration (19-20 crs.)

- CSC 350 - Introduction to Computer Graphics Credits: 4
- CSC 361 - Video Game Programming Credits: 4
- CSC 451 - Computer Graphics Algorithms Credits: 4
- CSC/SWE/CMPE/ELEC Elective at 300 level or above

## Interdisciplinary Course (Choose one):

- ART 217 - Computer Design I Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 339 - Remote Sensing Credits: 3

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

### Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

# Computer Science, Related Discipline Concentration, B.S.

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

## Core Requirements (47 crs.)

### Mathematics

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

### Computer Science

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

## Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1

- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

## Related Discipline Concentration

- 2 CSC/SWE/CMPE/ELEC Electives at the 300 level or above
- Major/Minor in other discipline

\*No electives can overlap with your other major/minor

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

### Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

## Electrical Engineering, B.S.

The Bachelor of Science in Electrical Engineering (EE) program provides a balance between theory and practice, and is designed to meet national accreditation requirements. Ship's EE program prepares students for careers in a broad array of electrical engineering fields including:

- Semiconductor and circuit design
- Mixed-signal embedded systems

- Industrial controls
- Communications system engineering

Students will learn about the impact of engineering solutions in a global, economic, environmental, and social context. Graduates will have an ability to use techniques, skills, and modern engineering tools necessary for engineering practice, and will engage in life-long learning to continue developing their skills and knowledge of the practice.

## Degree Requirements

### Math Cognate Courses (22 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 322 - Differential Equations Credits: 3
- MAT 375 - Probability and Statistics for Engineers Credits: 4

### Physics Courses (20 crs.)

- PHY 123 - Physics I Laboratory Credits: 1  
and
- PHY 205 - Intermediate Physics I Credits: 3  
OR
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 125 - Physics II Laboratory Credits: 1  
and
- PHY 206 - Intermediate Physics II Credits: 3  
OR
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 355 - Electronics Credits: 4

### Engineering Core (12 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

### Computer Engineering Courses (14 crs.)

Student can choose either CMPE 498 or CMPE 499

- CMPE 220 - Computer Organization Credits: 4
- CMPE 322 - Microcontrollers & Interfaces Credits: 4
- CMPE 420 - Digital and Reconfigurable Computing Credits: 4
- CMPE 498 - Engineering Research Methods Credits: 2 or
- CMPE 499 - Engineering Design & Development Credits: 2

## Electrical Engineering Courses (12 crs.)

- ELEC 210 - Signals and Systems Credits: 4
- ELEC 300 - Foundations of Electronic Systems Credits: 4
- ELEC 360 - Communications Systems Credits: 4

## Electives (4 crs.)

CMPE or ELEC courses, 300 level or above, or Internship

## Software Engineering, B.S.

Software engineers develop really big software applications. When an application is too big for a few people to build, two things become critical. First, code that works is no longer good enough. Since a lot of people are going to have to work on the software, the quality of the internal design of the software matters. We need good ways to divide the system into pieces so different people can work on it and so that functionality can continue to be added to it. Second, there are specialized tools and team management processes that we use to ensure that the pieces we are building will fit together without losing any functionality. In addition, we need to be able to predict when we will be able to make a quality deliverable to our customer. Students studying software engineering complete a core of computer science courses and specialized courses in project management, software design patterns, large scale architectures, and team product development.

Software engineering graduates are sought by organizations that have rigorous demands on their software. This includes military applications, fault tolerant applications like airplane control systems, and applications that are too large to fit on one machine. Also, large software development organizations employ software engineers to coordinate the activities of many software developers. This means that software engineers can work on anything from PC-based applications to real-time embedded control systems to enterprise-wide systems. Since they are well-versed in computer science techniques, software engineers can work in any software development activity.

## Engineering (9 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

## Software Engineering (20 crs.)

- SWE 200 - Design Patterns Credits: 4



- SWE 300 - Crafting Quality Code Credits: 4
- SWE 400 - Large Scale Architectures Credits: 4
- SWE 415 - Interdisciplinary Development Credits: 4
- SWE 420 - Extreme Programming Credits: 4

## Computer Science (16 crs.)

- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 431 - Computer Networks Credits: 4

## Computer Engineering (8 crs.)

- CMPE 220 - Computer Organization Credits: 4
- CMPE 320 - Operating Systems Credits: 4

## Mathematics (16 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 375 - Probability and Statistics for Engineers Credits: 4

## Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3

## Electives

- 300/400 Level CSC/CMPE or SWE Elective

## **Mechanical Engineering, B.S.**

The Bachelor of Science in mechanical engineering program prepares students for a wide variety of careers including the design and manufacturing of mechanical and, increasingly, electromechanical components and systems. Advances in technology continue to transform mechanical engineering, and we are using this new program as an opportunity to offer a program that prepares students for the modern workforce. The curriculum includes a focus on professional engineering practice, access to the latest Computer Assisted Design (CAD) and Computer Assisted Manufacturing (CAM) tools, with an emphasis on design for manufacturability, materials, modeling, simulation, process control, and rapid prototyping. One important aspect of this program will be a balance between theory and hands-on practice that will prepare students to be effective and practical engineers when they graduate.

### **Math Requirements (22 crs.)**

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 317 - Statistics II Credits: 3
- MAT 322 - Differential Equations Credits: 3

### **Science Requirements (20 crs.)**

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 331 - Mechanics I Credits: 4

### **Engineering Core (12 crs.)**

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

### **Mechanical Engineering Requirements (35 crs.)**

- CMPE 499 - Engineering Design & Development Credits: 2

- ELEC 230 - Instrumentation Credits: 3
- ELEC 330 - Control Systems Credits: 3
- MECH 200 - Statics Credits: 3
- MECH 210 - Dynamics Credits: 4
- MECH 220 - Fluids Credits: 4
- MECH 300 - Engineering Materials Credits: 4
- MECH 310 - Manufacturing Processes Credits: 4
- MECH 400 - Design Methods Credits: 4
- MECH 410 - Mechanics of Thermodynamics Credits: 4

## **Computer Science, Computer Science Applications Concentration, B.S.**

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

### **Core Requirements (47 crs.)**

#### **Mathematics**

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

#### **Computer Science**

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

### **Two Semester Science Sequence**

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

## Computer Science Applications Concentration Requirements (20 crs.)

- CSC 350 - Introduction to Computer Graphics Credits: 4
- CSC 403 - Machine Learning Credits: 4
- CSC 410 - Theoretical Foundations of Computer Science Credits: 4
- CSC 431 - Computer Networks Credits: 4
- CSC 462 - Artificial Intelligence Credits: 4

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

### Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

## **Minor**

### **Computer Science Minor**

#### **Core Courses (20 crs.)**

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1 or
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- SWE 200 - Design Patterns Credits: 4 or
- CMPE 220 - Computer Organization Credits: 4
- 2 electives from CSC, CMPE or SWE at 300 level or higher.

### **Disability Studies Program**

The Disability Studies Minor provides students with a cutting-edge, interdisciplinary body of knowledge and skills geared toward the exploration of the meaning and impact of disability across time, place, and group. As a field akin to Women's and Gender Studies and Ethnic Studies, Disability Studies sees individuals with disabilities as a valuable and integral part of the human community, and it examines the ways in which understandings of disability shape the fundamental aspects of our lives, relationships, and societies. In addition, the program raises awareness of disability issues, knowledge of disability rights and laws, and best practices towards creative toward inclusive and accessible environments and communities. The knowledge and skills gained will prepare students for disability-related careers and advanced study in disability studies, and will enhance and deepen their understanding of the multicultural fabric of contemporary society.

## **Minor**

### **Disability Studies Minor**

The Disability Studies Minor provides students with a cutting-edge, interdisciplinary body of knowledge and skills geared toward the exploration of the meaning and impact of disability across time, place, and group. As a field akin to Women's and Gender Studies and Ethnic Studies, Disability Studies sees individuals with disabilities as a valuable and integral part of the human community, and it examines the ways in which understandings of disability shape the fundamental aspects of our lives, relationships, and societies. In addition, the program raises awareness of disability issues, knowledge of disability rights and laws, and best practices towards creative toward inclusive and accessible

environments and communities. The knowledge and skills gained will prepare students for disability-related careers and advanced study in disability studies, and will enhance and deepen their understanding of the multicultural fabric of contemporary society.

18 crs.

### Core Requirements (6 crs.)

To complete the Disability Studies minor, students will take the two core courses (DS 100 and DS 400) and four of the approved electives. Elective coursework must represent at least two academic disciplines (defined by course prefix). At least six credits of the minor coursework must be at the 300 or 400 level. At least 50% of the courses for the minor must be taken at Shippensburg University.

- DS 100 - Introduction to Disability Studies Credits: 3
- DS 400 - Capstone in Disability Studies Credits: 3

### Approved Electives (12 crs.)

- ANT 350 - Medical Anthropology Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 397 - Selected Topics in Criminal Justice Credits: 3
- DS 391 - Internship in Disability Studies Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 445 - Proactive Approaches for Classroom and Behavior Management Credits: 3
- EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EEC 490 - Selected Topics in Special Education Credits: 1-3
- ENG 250 - Introduction to Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- GRN 100 - Introduction to Gerontology Credits: 3
- HON 411 - Honors: Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 346 - Human Resource Management Law Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 347 - Special Fields of Social Work: Behavioral Health Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 369 - Medical Sociology Credits: 3

- SOC 371 - Social Dynamics of Aging Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3
- SPN 490 - Selected Topics in Spanish Credits: 3

## **Economics Department**

The Department of Economics offers undergraduate programs leading to the Bachelor of Science (B.S.) degree. The economics major is designed to enable students to analyze problems relating to choice, equity, and efficiency from an individual as well as from a social standpoint. Students are prepared to be active, thinking members of society capable of productive and constructive participation. Many issues and policies are examined, ranging from globalization, technological change, and environmental concerns to questions of fiscal and monetary policy, poverty, inflation, and unemployment.

## **Economics Features**

Shippensburg University's economics department faculty members' academic specialties cover nearly all important topics in the field. In addition to both micro and macro theory and policy areas, the faculty have expertise in such diverse topics as healthcare and environmental issues, international trade, and econometrics. The department sponsors an Economics Club for interested students and has a local chapter of the national economic honor society, Omicron Delta Epsilon (ODE). The department has successfully competed in the Fed Challenge, a student-team panel competition sponsored annually by the Richmond Federal Reserve Bank.

## **Internship Policy**

Students can explore employment options and perhaps gain an edge in the labor market by having an internship. Internship hours will count as free electives.

## **Bachelor of Science**

### **Economics, Business Concentration, B.S.**

This concentration combines a solid background in economics with a significant exposure to important business-related analytical and conceptual skills. By completing the business minor students will gain an appreciation for managerial decision making and develop an awareness of how business skills are applied.

### **Economics B.S.**

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## **Course Requirements**

## Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Business Concentration

### Required Mathematics/Statistics (9-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4
- SCM 200 - Statistical Applications in Business Credits: 3

### Note:

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Required Business Courses (18 crs.)

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- Three credits from either a finance or accounting course
- Three additional John L. Grove College of Business credits



## Note:

SCM 200 requires MIS 142 as a prerequisite.

Students will have completed the required 18 credits for the business minor

## **Economics, Mathematics Concentration, B.S.**

This concentration would be especially well-suited for students preparing for graduate study in economics, which has become increasingly focused upon mathematics and statistical analysis.

Students are strongly encouraged to take ECO 484 Mathematical Economics and ECO 485 Econometrics as economics electives.

## **Economics B.S.**

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## **Course Requirements**

### **Required Economics (27 crs.)**

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

## Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## **Concentration Requirements**

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## **Mathematics Concentration**

## Required Math/Statistics Courses (21-23 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 217 - Statistics I Credits: 4

Plus three additional mathematics courses from among the following.

Other mathematics courses at the 200-level or above may be substituted, with advisement. At least two of these additional courses must be at the 300-level or above. Students will have completed the required 21 credits for the mathematics minor.

- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 317 - Statistics II Credits: 3
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 322 - Differential Equations Credits: 3
- MAT 425 - Advanced Algebraic Structures Credits: 3

## Economics, Political Science Concentration, B.S.

This combination will be appropriate for students planning to pursue careers in government, business, law, or international relations. While combining some aspects of a traditional political economy approach, this concentration will also heighten students' knowledge of the institutional and legal dimensions of major public policy debates.

### Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

### Course Requirements

#### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

#### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Political Science Concentration

### Required Math/Statistics Courses (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

#### Note:

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Required Political Science Courses (18 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS - Plus six additional political science credits three of which must be at the 300 level or higher

#### Note:

To fulfill the requirements for the minor in Political Science, students will have to complete PLS 141 and one additional course.

## Economics, Public Administration Concentration, B.S.

This sequence of courses would prepare students for careers in the public sector at either the local, state, or federal level, as well as for graduate studies. Economics strongly complements the policy and institutional focus of public administration.

### Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## Course Requirements

### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

#### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Public Administration Concentration

### Required Math/Statistics Sequence (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

#### Note:

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Required Public Administration Courses (18 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 371 - Public Management Credits: 3 or
- PLS 373 - Public Financial Administration Credits: 3

Plus three additional Public Administrative credits from among the following:

- PLS 231 - State and Local Government Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- Plus three additional political science or public administrative credits to fulfill the requirements for the minor

## **Economics, Social Science Concentration, B.S.**

Intended for students pursuing a broad based approach to understanding contemporary social issues, the social science concentration would be similar to traditional liberal arts or B.A. degree in economics. Students are encouraged to consider studying a foreign language as a purposeful use of some of their free elective credits.

### **Economics B.S.**

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

### **Course Requirements**

#### **Required Economics (27 crs.)**

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

#### **Note:**

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

### **Concentration Requirements**

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Social Science Concentration

### Required Mathematics Sequence (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3 or
- MAT 175 - Precalculus Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

#### Note:

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Allied Fields (18 crs.)

Students concentrating in the social sciences must take the following courses and credits in the appropriate allied fields.

#### Political Science

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS - Political Science elective at the 300 level or higher with advisement

#### Sociology or Anthropology

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 or
- ANT 111 - Cultural Anthropology Credits: 3
- Plus a 300 level elective in either disciplines selected with advisement

#### Geography, History, or Philosophy

- Two courses from one of these disciplines inclusive of a 300 level elective selected with advisement. Note: HIS 105 and HIS 106 do not fulfill this requirement.

## **Economics, Data Science Concentration, B.S.**

The B.S. in Economics and Data Science concentration provides students the foundation to employ the appropriate statistical techniques to help answer a wide variety of questions confronted by decision makers. According to CNBC.com, "With more and more companies using big data, the demand for [those]...who know how to manage the tsunami of information, spot patterns within it and draw conclusions and insights-is nearing a frenzy."

## Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## Course Requirements

### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

### Required Math (4-7 crs.)

- MAT 140A - College Algebra Credits: 4 *or*
- MAT 140B - College Algebra Credits: 3 AND
- MAT 181 - Applied Calculus Credits: 3  
OR
- MAT 211 - Calculus I Credits: 4

### Data Science Courses (19-20 crs.)

- CSC 104 - Programming in Python Credits: 3

OR

- CSC 110 - Computer Science I - Lecture Credits: 3 *and*
- CSC 106 - Computer Science I - Lab Credits: 1

OR

- MIS 240 - Introduction to Programming Concepts Credits: 3
  
- ECO 333 - Research and Analysis in Economics Credits: 3
- MAT 217 - Statistics I Credits: 4
- MAT 219 - Data Science I Credits: 3
- MAT 317 - Statistics II Credits: 3
- MAT 319 - Data Science II Credits: 3

## Minor

### Economics Minor

The minor in economics has advantages for both business majors and non-business majors. Minor in economics may be a smart move academically and for your career.

### Business Majors -19 crs.

The advantage for business majors is the minor in economics provides a liberal arts component to complement the business degree. Many employers are seeking students who can think about business problems in a broader context. They are also seeking students with problem solving and analytical abilities. A minor in economics demonstrates breadth, analytical ability, willingness to take challenging courses, and an understanding of the method of a social science. Business majors already take seven credit hours of economics. The economic minor requires only four additional elective courses (two of which must be at the 300/400 level), which can be selected to complement your major.

### Core Courses (7 crs.)

Students may substitute ECO 101 and ECO 102 for ECO 113.

- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3

### Electives (12 crs.)

Course selected by advisement.

A minimum of 6 credits must be earned at the 300/400 level

### Non-business Majors - 18 crs.

A minor in economics is an excellent complement to many majors. Economics is a relevant major for students preparing for a career in business, law, and many other fields who prefer a liberal arts education. The minor in economics provides some of the same background, but with less depth. With proper advisement, a minor in economics can provide the economics prerequisites for an MBA program or for graduate work in economics. The minor in



economics requires students to take ECO 101, ECO 102 and four additional electives courses (two of which must be at the 300/400 level). One of these can be used for general education category D. Many students already have a sequence in economics required by their major and can complete a minor by taking only a few additional courses. The minor in economics can be combined with a sequence of courses in business for students who are seeking employment in the business world, but do not want a business major. For example, ACC 200, ACC 201, BSL 261, MIS 142, and SCM 200 are some appropriate courses available to non-business majors at the lower division level for students who have taken the prerequisites. Some upper division business courses may also be available to non-business majors.

## Core Courses (6 crs.)

Students may substitute ECO 113 for ECO 101 and ECO 102, but then will need to take an additional elective.

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

## Electives (12 crs.)

Course selected by advisement.

A minimum of 6 credits must be earned at the 300/400 level.

# English Department

The Department of English offers undergraduate programs leading to the Bachelor of Arts degree. Students who graduate with a B.A.- Literary Studies, a B.A. with Writing Emphasis, or a B.A. with Secondary Certification have learned to read critically and write intelligently about literature and related fields. They will be familiar with works in drama, prose, and poetry from both the Western and non-Western traditions and have a knowledge of the structures of language, the genres in which literature is classified, the historical contexts of literature and the various methodologies that facilitate the analysis and understanding of literature. Most important, graduates in English have some insight into the world of ideas, their own and those of others.

## English Features

Students in English begin their studies by enrolling in a core of introductory courses that gives them a basic, general understanding of literature. They continue their studies by enrolling in elective courses that allow in-depth examination of certain historical periods, literary movements, and individual authors. Students will take a seminar and, upon approval, may work closely with an individual faculty member in the writing of a senior thesis. The English department also offers a variety of internships.

## English Career Opportunities

More career opportunities are opening for college and university graduates who can read and write well. Because success in most professions demands effective thinking, the study of English is excellent preparation for careers in law, medicine, education, technical writing, journalism, theology, personnel, marketing, management, administration, publishing, and writing. Few majors prepare students so well for a variety of careers as English does.

## Bachelor of Arts

# English, Literary Studies, B.A.

Students pursuing a B.A. in English-Literary Studies focus intensively on English, American, and Global literatures, becoming proficient in research methods and textual analysis. This degree prepares them to enter into a variety of fields post-graduation, including advanced graduate studies, journalism, publishing, public relations, and law, just to name a few. With an English major, future career possibilities are endless. English majors are currently in high demand due to their communication skills, writing skills, and ability to think critically in regards to problem solving.

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## English Major Requirements (42 crs.)

### Required Courses (9 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

### Required Survey Courses (9 crs.)

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

## Advanced Studies in Literature

Students must take at least 1 course in each category. (Note: students must take 4 additional courses in this section to reach the 24 credit hours required.)

## Writing

Complete at least 1 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3

- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3
- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

## History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 430 - Special Topics in Literary History and Movements Credits: 3

## Identities

Complete at least 1 of the following:

- ENG 445 - Special Topics in Identities Credits: 3

- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3

## **English with Secondary Certification, B.A.**

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **English Major Requirements (39 crs.)**

Students receiving certification must take one course in world literature (ENG 240 or ENG 385).

### **Required Courses (15 crs.)**

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

### **Required Survey Courses (9 crs.)**

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

### **Advanced Studies in Literature (15 crs.)**

Complete at least 1 course in each category. (Note: students must take 1 additional course in this section to reach the 15 credit hours required.)

### **Writing**

Complete at least 1 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3
- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3
- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

## History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 430 - Special Topics in Literary History and Movements Credits: 3

## Identities

- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 445 - Special Topics in Identities Credits: 3

## Required General Education Course

- PSY 101 - General Psychology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 290 - Introduction to English/Language Arts Education Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EDU 422 - Methods of Teaching English in Secondary Schools Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

### Note:

Students seeking certification in secondary education must also complete 2 math courses (except MAT 185 ).

## English, Writing Concentration, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## English Major Requirements (42 crs.)

### Required Courses (9 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

## Required Survey Courses (9 crs.)

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
  
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
  
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

## Writing (12 crs.)

Complete 4 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3
- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Advanced Studies in Literature (12 crs.)

Complete at least 1 course in each category. (Note: students must take 1 additional course in this section to reach the 12 credit hours required.)

### Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3

- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

## History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3

## Identities

Complete at least 1 of the following:

- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 445 - Special Topics in Identities Credits: 3

## Minor

### English Minor

18 crs.

Required (3 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3

Note:



ENG 130 is a required prerequisite for all English Minors enrolling in 300- or 400- level English courses.

## Electives (15 crs.)

Five additional English courses, two of which (6 credits) must be 300- or 400-level. General education courses in English may not be used to fulfill free electives. May include an internship, up to three credits.

# Ethnic Studies Program

Ethnic Studies is a multi-ethnic and interdisciplinary program that offers a broad and intense course of study of the various ethnic groups in the United States. Students are encouraged to develop concepts and theories that help clarify attitudes about people of other ethnicities. Through understanding and appreciating others' cultures, students can gain an understanding of the multiple realities of our complex and culturally diverse society.

## Certificate

### Ethnic Studies Certificate

To complete the certificate in Ethnic Studies, students must take Introduction to Ethnic Studies (ETH 100) and three of the approved electives. These three electives must be from at least two separate disciplines. Two courses can be double counted toward the student's major at the 300 or 400 level. All four courses must be taken at Shippensburg University.

12 crs.

#### Required

- ETH 100 - Introduction to Ethnic Studies Credits: 3

## Minor

### Ethnic Studies Minor

Ethnic Studies is a multi-ethnic and interdisciplinary program that offers a broad and intense course of study of the various ethnic groups in the United States. Students are encouraged to develop concepts and theories that help clarify attitudes about people of other ethnicities. Through understanding and appreciating others' cultures, students can gain an understanding of the multiple realities of our complex and culturally diverse society.

18 crs.

To complete a minor in Ethnic Studies, students must take all three core classes and three approved electives. All students are required to take at least six credits of upper level (300/400 level) courses. Two courses must be taken from at least two different disciplines. All courses must be taken at Shippensburg University.

## Core Requirements (9 crs.)

- ETH 100 - Introduction to Ethnic Studies Credits: 3
- ETH 101 - Introduction to African-American Studies Credits: 3
- ETH 102 - Introduction to Latino Studies Credits: 3

### Approved Electives (9 crs.)

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 341 - North American Indians Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- CRJ 411 - Terrorism Credits: 3
- CRJ 452 - Race, Ethnicity, and Crime Credits: 3
- CRJ 464 - Popular Culture, Crime and Justice Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ETH 390 - Ethnic Studies Internship Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 305 - The Civil War Era Credits: 3
- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- MUS 129 - American Popular Music Credits: 3
- PLS 325 - African American Politics Credits: 3
- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- SOC 243 - Minority Groups Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 421 - Impact of International Migration Credits: 3
- SWK 250 - Assessing Individuals in the Social Environment Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3

## Geography/Earth Science Department

The Department of Geography-Earth Science offers undergraduate programs leading to the Bachelor of Science and the Bachelor of Science in Education degrees. The undergraduate programs in the geography-earth science department are designed to give students an appreciation of the physical and cultural environment of the earth as well as the concept of sustainability. Students will develop skills in collecting, recording, and interpreting geoenvironmental data. They will become involved in laboratory work, field investigations, and environmental management that will sharpen student skills to arrive at solutions based on an inductive application of all available sources and materials. Students will be able to identify, distinguish trends, and analyze and interpret physical, socioeconomic, and geo-political patterns in an

urban/rural or regional setting. The fundamental geographic themes of location, place, sustainability, interrelationships between the physical and cultural environment, movement, and regions are emphasized.

## **Geography-Earth Science Features**

The geography-earth science department has a strong interdisciplinary nature. With diverse backgrounds, departmental faculty integrate findings from a variety of areas enabling members to develop insights on real problems in various areas such as studying environmental hazards in the Cumberland Valley or urban growth issues in China. In departmental courses and programs, faculty explain why location is important, and why areas and places are different physically and culturally. The unique quality of the geography-earth science department is its object of analysis is the earth's surface and its purpose is to understand how that surface is structured and differentiated and how people have affected the landscape.

## **Geography-Earth Science Career Opportunities**

In a very real sense, geography is both a natural science (because it deals with the land, sea and air of our planet) and a social science (because it is concerned with the distribution of cultural phenomena including people and industries). As the earth's population grows, it becomes increasingly imperative for people to understand sustainability and the global patterns that shape our lives. The world we live in requires an understanding of international issues and geographic relationships. For that reason, the field of geography-earth science will continue to expand and grow.

Most geographers/earth scientists work in one of five basic career fields: business, government, teaching, planning, and consulting. Within these five fields geographers/earth scientists are called upon for their expertise in such areas as selecting favorable locations for capital investments, developing effective strategies for corporate or governmental planning, environmental planning and land use analysis, geology and atmospheric studies, cartography, computer applications and geographic information systems, and educating all age groups regarding proper use of the environment. Career opportunities are growing rapidly in fields such as the environmental sciences, environmental planning, regional analysis, local and state government, remote sensing, geographic information systems, environmental impact analysis, water resources and hydrology. Many past graduates have been very successful in obtaining jobs in their major field of study. The department has a strong internship program where students can obtain practical experience. An alumni network has been developed to assist majors in the job selection process.

## **Bachelor of Science**

### **Geoenvironmental Studies, B.S.**

#### **Geography-Earth Science (42 crs.)**

##### **Required Core Courses (15 crs.)**

- ESS 210 - Physical Geology Credits: 3  
OR
- ESS 110 - Introduction to Geology Credits: 3  
AND
- ESS 212 - Historical Geology Credits: 3 *or*
- ESS 214 - Geology of National Parks Credits: 3 *or*
- GEO 306 - Geomorphology Credits: 3

- ESS 355 - Meteorology Credits: 3  
OR
- ESS 111 - Introduction to the Atmosphere Credits: 3  
AND
- ESS 404 - Applied Meteorology and Climatology Credits: 3 *or*
- GEO 203 - Climatology Credits: 3
  
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 391 - Geography Seminar Credits: 3

### Geography Electives (6 crs. min.)

- GEO 230 - Economic Geography Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 320 - Historical Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

### Note:

\* Regional geography courses may also be counted as electives by advisement.

### Geoenvironmental Complex System Electives (9 crs. min.)

- ESS 404 - Applied Meteorology and Climatology Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- ESS 410 - Sedimentary Geology and Paleoenvironments Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- ESS 490 - Selected Topics in Earth Science Credits: 1-3
- GEO 301 - Introduction to Biogeography Credits: 3
- GEO 306 - Geomorphology Credits: 3
- GEO 402 - Medical Geography Credits: 3
- GEO 404 - Groundwater and Hydrogeology Credits: 3
- GEO 421 - Environmental Law Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 490 - Selected Topics in Geography Credits: 1-3
- GEO 491 - Selected Topics in Geography Credits: 3

## Technique Course Electives (6 crs. min.)

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 463 - Applied Geophysical Imaging Credits: 3

## Geoenvironmental Electives (3 crs. min.)

Any 200-400 level course listed in the above categories not previously taken may be used as a Geoenvironmental elective.

- GEO 203 - Climatology Credits: 3
- GEO 306 - Geomorphology Credits: 3
- GEO 397 - Introduction to Research Credits: 1-3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 490 - Selected Topics in Geography Credits: 1-3
- ESS 212 - Historical Geology Credits: 3
- ESS 214 - Geology of National Parks Credits: 3
- ESS 220 - Oceanography Credits: 3
- Marine Science Consortium Course

## Internship Requirement:

Internship - 2.0 overall and major average required, junior status (60 cr.), must be taken before applying for an internship.

- GEO 360 - Internship in Geography I Credits: 3

## Allied Fields (22+ crs.)

## Biology (9-11 Credits by Advisement)

At least one course must be taken at or above 200 level

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 145 - Environmental Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 242 - Ecology Credits: 3

- BIO 442 - Aquatic Ecology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Note:

BIO 162, BIO 145, BIO 242, and BIO 448 are strongly recommended. If student has a special interest in zoology or botany, they should follow sequential courses in that area, i.e., field zoology, field botany and plant taxonomy.

### Chemistry/Physics (7-8 Credits by Advisement)

- CHM 105 - An Observational Approach Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1

### Computer Science (3-4 Credits by Advisement)

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 104 - Programming in Python Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- CSC 191 - General Education Special Topics Credits: 3
- MIS 142 - Business Computer Systems Credits: 3

### Mathematics (3-4 credits by advisement)

- MAT 117 - Applied Statistics Credits: 3
- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## **Geography, Geographic Information Systems Concentration, B.S.**

### Geography, B.S.

Land Use and Geographic Information Systems (GIS) concentrations. A 12-credit Geographic Information Systems (GIS) Certificate Program is also offered.

## Geography (15 crs.)

Core courses required for all concentrations-Land Use and GIS.

### Core courses (required):

- GEO 105 - Physical Geography Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
  
- GEO 322 - Urban Geography Credits: 3 or
- GEO 244 - Land Use Credits: 3
  
- GEO 391 - Geography Seminar Credits: 3

## Geographic Information Systems Concentration (24 crs.)

### Required

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 360 - Internship in Geography I Credits: 3  
*At least 3 credits of internship required*

### Select one:

- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3

### Note:

GEO 244 or GEO 322 if not taken in in Geography core.

### Select two:

- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 463 - Applied Geophysical Imaging Credits: 3
- GEO 400-level Geography elective

## Allied Courses (25 + crs.)

Select two:

- PHL 332 - Ethical Issues and Computer Technology Credits: 3
- PLS 231 - State and Local Government Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 431 - Pennsylvania Local Government Credits: 3
- SOC 220 - Social Stratification Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 363 - Population Problems Credits: 3

12+ crs.

- ART 217 - Computer Design I Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- MIS 142 - Business Computer Systems Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 355 - Database Applications Credits: 3
- CSCxxx by advisement

7+ crs.

- MAT 117 - Applied Statistics Credits: 3
- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4

Required:

- ENG 238 - Technical/Professional Writing I Credits: 3

## **Geography, Land Use Concentration, B.S.**

### **Geography, B.S.**

Land Use and Geographic Information Systems (GIS) concentrations. A 12-credit Geographic Information Systems (GIS) Certificate Program is also offered.

### **Geography (15 crs.)**



Core courses required for all concentrations-Land Use and GIS.

### Core courses (required):

- GEO 105 - Physical Geography Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
  
- GEO 322 - Urban Geography Credits: 3 or
- GEO 244 - Land Use Credits: 3
  
- GEO 391 - Geography Seminar Credits: 3

### Land Use Concentration (21 crs.)

#### Required

- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 360 - Internship in Geography I Credits: 3  
*At least 3 credits of internship required*

#### Select five of the following:

- ESS 214 - Geology of National Parks Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 320 - Historical Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 339 - Remote Sensing Credits: 3

Note: GEO 244 or GEO 322 if not taken in in Geography core.

### Allied Courses (15 crs.)

#### Political Science (6 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 431 - Pennsylvania Local Government Credits: 3
- PLS XXX - Political Science course by advisement

### Math-Computer Science (6 crs.)

#### Required:

- MAT 117 - Applied Statistics Credits: 3

Select one:

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1

Psychology (3 crs.)

- PSY 105 - Research Design and Statistics for the Behavioral Sciences I Credits: 3 or
- GEO 441 - Quantitative Methods Credits: 3

## **Sustainability, Environmental Conservation Concentration, B.S.**

Sustainability Core (6 crs.)

- ESS 108 - Conservation of Natural Resources Credits: 3  
OR
- BIO 145 - Environmental Biology Credits: 3
- GEO 427 - Sustainability Credits: 3

Concentration Core (12+ crs.)

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 360 - Internship in Geography I Credits: 3
- GEO 391 - Geography Seminar Credits: 3

Sustainable Systems (9 crs.)

Choose 9 credits from the following:

- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3

- GEO 450 - Geography-Geology Field Studies Credits: 1-3 *Strongly recommended; can only count in one category*

## Human Sustainability Electives (6 crs.)

Choose 6 credits from the following:

- GEO 140 - Cultural Geography Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3

## Technique Course Electives (9 crs.)

Choose 9 credits from the following:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3 *Strongly recommended*
- GEO 450 - Geography-Geology Field Studies Credits: 1-3 *Strongly recommended; can only count in one category*
- GEO 463 - Applied Geophysical Imaging Credits: 3

## Biology (3 crs.)

Choose 3 credits from the following:

- BIO 205 - Marine Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3 *Strongly recommended*
- BIO 245 - Marine Ecology Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3

## Psychology and Sociology (6 crs.)

Choose 6 credits from the following:

- PSY 350 - Psychology of Sustainability Credits: 3 *Strongly recommended*
- SOC 265 - Global Society Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3

- SOC 363 - Population Problems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Economics and Business (3 crs.)

Choose 3 credits from the following:

- ECO 345 - The Economics of Growth and Development Credits: 3
- ECO 355 - Environmental Economics Credits: 3 *Strongly recommended*
- MGT 447 - Business and Society Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3  
SCM 3XX Sustainable Operations Management
- SCM 420 - Global Logistics Systems Credits: 3

## English, History, and Communication (6 crs.)

Choose 6 credits from the following:

- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 359 - Native American Literature Credits: 3
- HCS 345 - Environmental Communication Credits: 3 *Strongly recommended*
- HIS 358 - American Environmental History Credits: 3 *Strongly recommended*

## Bachelor of Science in Education

### Earth and Space Science, B.S.Ed.

Major (24 crs.)

Required (12 crs.)

- ESS 210 - Physical Geology Credits: 3
- ESS 212 - Historical Geology Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 220 - Oceanography Credits: 3

Electives in Earth Science (12 crs.)

Selected with advisement

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3

- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 397 - Introduction to Research Credits: 1-3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3

## Allied Fields (36 crs.)

Certification in earth science, general science and environmental education requires the following courses:

### Biology (9 Hours by Advisement)

- BIO 145 - Environmental Biology Credits: 3
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Chemistry (8 Hours for General Science)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

### Physics (11 Hours for General Science)

- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

### Math (8+ Hours by Advisement)

- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## Professional Education Requirements (33 crs.)

### Required Courses

- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Geography, Comprehensive Social Studies, B.S.Ed.

### Required Courses in Geography (12 crs.)

- GEO 101 - World Geography Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 or
- ESS 111 - Introduction to the Atmosphere Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 140 - Cultural Geography Credits: 3

### Elective Courses in Geography (12 crs.)

Students majoring or concentrating in geography will select with advisement a minimum of four elective courses in geography. Electives should be chosen in the areas of specialization which either may serve a future teaching purpose or may establish a basis for future graduate study.

## Required Courses in Allied Social Studies (33 crs.)

### Economics (6 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

### History (9 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

### Mathematics (3 crs.)

- MAT 117 - Applied Statistics Credits: 3

### Political Science (Government) (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS XXX - Political Science course by advisement

### Psychology (3 crs.)

- PSY 101 - General Psychology Credits: 3

### Cognate Field: (3 crs.)

One 200 level or above courses from one of the following areas: history, political science, or economics

### Required Professional Courses (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 412 - Teaching Social Studies in Secondary Schools I Credits: 3
- EDU 413 - Teaching of Social Studies II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 1 additional math courses (except MAT 185 )

### Required Field Experience

See advisor

## Certificate

### Geographic Information Systems (GIS) Certificate

12 crs.

### Required

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3

### Select Two:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 463 - Applied Geophysical Imaging Credits: 3

## Minor

### Geographic Information Science Minor

18 crs.

#### Required Core (9 crs.)

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3

#### Allied Geo-techniques (6 crs.)

Choose two:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3

#### Geography-Earth Science courses (3 crs.)

Choose one:

- ESS 210 - Physical Geology Credits: 3
- ESS 220 - Oceanography Credits: 3



- GEO 226 - Hydrology Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 301 - Introduction to Biogeography Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3

## **Geography-Earth Science Minor**

21 crs.

### **Required (9 crs.)**

- 100 level Geography and/or Earth Science course
- 200-300 level Geography-Earth Science course
- 400 level Geography-Earth Science course

### **Electives (12 crs.)**

- ESS or GEO courses selected by advisement.

## **Sustainability Minor**

### **Sustainability Core (6 crs.)**

- ESS 108 - Conservation of Natural Resources Credits: 3  
OR
- BIO 145 - Environmental Biology Credits: 3
- GEO 427 - Sustainability Credits: 3

### **Sustainable Systems (3 crs.)**

Choose 3 credits from the following:

- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

## Biology (3 crs.)

Choose 3 credits from the following:

- BIO 205 - Marine Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3 *strongly recommended*
- BIO 245 - Marine Ecology Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3

## Psychology & Sociology (3 crs.)

Choose 3 credits from the following:

- PSY 350 - Psychology of Sustainability Credits: 3 *strongly recommended*
- SOC 265 - Global Society Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3
- SOC 363 - Population Problems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Economics & Business (3 crs.)

Choose 3 credits from the following:

- ECO 345 - The Economics of Growth and Development Credits: 3
- ECO 355 - Environmental Economics Credits: 3 *strongly recommended*
- GEO 230 - Economic Geography Credits: 3
- MGT 447 - Business and Society Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

## English, History, & Communication (3 crs.)

Choose 3 credits from the following:

- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 359 - Native American Literature Credits: 3
- HCS 345 - Environmental Communication Credits: 3 *strongly recommended*
- HIS 358 - American Environmental History Credits: 3 *strongly recommended*

# Healthcare Administration Program

The Bachelor of Science in Healthcare Administration is a degree completion program (DCP) designed for working adults who have earned 60 or more college credits. Classes are taught by Shippensburg University faculty and are conveniently offered in the evenings at Dixon University Center in Harrisburg and HACC-Gettysburg. Graduates will be prepared for entry-level managerial positions, with strong backgrounds in health care economics and finance, law, human resources, and strategic management.

The program's core courses give students the opportunity to explore how a liberal arts education can enhance their career opportunities. These courses will help students understand the structure of organizations, the behavior of individuals within organizations, and how to resolve conflict in order for organizations to function efficiently. The professional courses explore the legal, financial, resource, and strategic issues of health care management and administration. The electives enhance the educational experience, and the internship or research project at the end of the program promotes the integration of theory practice.

Regularly admitted students with an interest in this major must meet the degree completion admission requirements. Please be advised that the degree completion program leading to a Bachelor of Science in Healthcare Administration is only offered in Harrisburg and Gettysburg.

## **Degree Requirements**

- Completion of the 45-credit Healthcare Administration program with a minimum of a 2.0 cumulative QPA;
- Fulfillment of 48 credits of general education requirements;
- Attainment of a minimum of 120 college/university credits.

## **History/Philosophy Department**

The Department of History/Philosophy offers undergraduate programs leading to two degrees: the Bachelor of Arts and the Bachelor of Science in Education. The department also offers a Bachelor of Arts with a Public History Concentration for students interested in careers at historical institutions such as museums, archives, or historic sites. The history major is designed to generate and sustain an interest in the world, past and present. This is done so students can become better citizens, more effective participants in society, and acquire the reading, writing, and thinking skills essential for success in any career or occupation. Students can also minor in either history or philosophy.

## **History Features**

Shippensburg University's history department offers a wide range of opportunities to take courses and to pursue research in almost any area of student interest. These specialties fall into the three broad areas of American, European, and African/Asian/Latin American history. Also, there are studies in archival and museum work along with the opportunity for internships in these areas. The university is within driving distance of major collections of sources which enhance and enrich historical studies. Also, there are studies in archival and museum work, historic preservation, local history, and oral history. Hands-on experience can also be gained through internships at many local sites, including Gettysburg National Military Park, the United States Military History Institute, and the Pennsylvania Historical and Museum Commission.

## **History/Philosophy Career Opportunities**

History, considered either as a humanity or as a social science, is a broad discipline that serves as general preparation for a variety of careers: law, education, theology, writing, museum and archives work, many federal jobs (particularly in foreign service, intelligence and related fields), business, and others.

Philosophy trains students in the critical thinking skills needed in these same fields.

## **Bachelor of Arts**

### **History, B.A.**

#### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **History-Field of Specialization (36 crs.)**

#### **Required (18 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

#### **Restricted Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

#### **Free Electives in History (6 crs.)**

Only one course at the 200 level, and the rest at 300 level or above.

#### **Portfolio Requirement:**

For assessment and career development purposes, all B.A. and B.S.Ed. majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

### **History, Public History Concentration, B.A.**

#### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**42 crs.**

### Required (18 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### Restricted Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### Public History Methods (6 crs.)

#### Required

- HIS 319 - Introduction to Public History Credits: 3

#### Select one: 3 crs.

- HIS 390 - Selected Topics in History Credits: 3
- HIS 413 - Pennsylvania History Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HIS 433 - Oral History Credits: 3
- HIS 460 - Archives and Public History Credits: 3
- HIS 490 - Selected Topics in History Credits: 1-3

### Required Internship (6 crs.)

- HIS 387 - History Internship Credits: 3
- HIS 389 - History Internship Credits: 3
- HIS 391 - History Internship Credits: 3-6

### Portfolio Requirement:

For assessment and career development purposes, all B.A. and B.S.Ed. majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

## **History, European History Concentration, B.A.**

### **Required History Courses (18 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### **Restricted History Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### **European History Concentration (12 crs.)**

Select 12 credits from the following courses:

- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 325 - History of the Tsarist Russia Credits: 3
- HIS 326 - History of the U.S.S.R. Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3
- HIS 332 - English History: 1066 to Present Credits: 3
- HIS 334 - Europe 1715-1815: The Era of the Industrial and French Revolutions Credits: 3
- HIS 337 - History of the Byzantine Empire Credits: 3
- HIS 348 - The History of Ancient Rome Credits: 3
- HIS 356 - History of 19th Century Europe Credits: 3
- HIS 357 - History of Holocaust Credits: 3
- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- HIS 361 - History of 20th Century Europe Credits: 3
- HIS 362 - Europe 1450-1715: The Era of the Renaissance and Reformation Credits: 3
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)
- HIS 390 - Selected Topics in History Credits: 3 (with advisement)
- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)

- HIS 423 - Issues in 20th-Century Europe Credits: 3
- HIS 492 - Selected Topics in History Credits: 3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)

## **History, American History Concentration, B.A.**

### **Required History Courses (18 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### **Restricted History Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### **American History Concentration (12 crs.)**

Select 12 credits from the following courses:

- HIS 301 - The West in American History Credits: 3
- HIS 302 - American Business History Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 305 - The Civil War Era Credits: 3
- HIS 307 - Contemporary U. S. History since 1945 Credits: 3
- HIS 309 - History of the American Worker Credits: 3
- HIS 314 - History of Jacksonian America Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 319 - Introduction to Public History Credits: 3
- HIS 338 - Colonial America Credits: 3
- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- HIS 358 - American Environmental History Credits: 3
- HIS 385 - Selected Topics in History Credits: 3 (with advisement)
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 388 - Selected Topics in History Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)

- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)
- HIS 402 - Revolutionary America Credits: 3
- HIS 413 - Pennsylvania History Credits: 3
- HIS 428 - Issues in the Gilded Age and Progressive Era Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HIS 433 - Oral History Credits: 3
- HIS 490 - Selected Topics in History Credits: 1-3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)

## **History, Asian & Middle Eastern History Concentration, B.A.**

### **Required History Courses (18 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### **Restricted History Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### **Asian & Middle Eastern History Concentration**

- HIS 339 - The Central Islamic Lands, 500-1700 Credits: 3
- HIS 344 - History of the Modern Middle East Credits: 3
- HIS 350 - History of Modern Japan Credits: 3
- HIS 353 - Modern Southeast Asia Credits: 3
- HIS 354 - Traditional China Credits: 3
- HIS 355 - History of Modern China Credits: 3
- HIS 382 - Selected Topics in History Credits: 1-3 (with advisement)
- HIS 383 - Selected Topics in History Credits: 1-3 (with advisement)
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)
- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)
- HIS 454 - China and the Outside World Credits: 3
- HIS 482 - Selected Topics in History Credits: 3 (with advisement)



- HIS 483 - Selected Topics in History Credits: 3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)
- PHL 336 - Concepts in Buddhism Credits: 3

## **Bachelor of Science in Education**

### **History, Comprehensive Social Studies, B.S.Ed.**

A 3.0 QPA will be required for entrance into the B.S.Ed. program and for matriculation to professional standing. The requirements for the B.S.Ed. include the completion of specific social studies, general education, and professional education courses. Where appropriate, these courses may also be used to fulfill general education categories.

#### **Required (57 crs.)**

##### **History (30 crs.)**

##### **Required (12 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

##### **Restricted Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

##### **Free Electives (6 crs.)**

- Only one course at the 200 level, and the rest at 300 level or above.

#### **Required Allied Social Studies (27 crs.)**

##### **Political, Economic and Geographic Science (6 crs.)**

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3

##### **Social and Behavior Science (6 crs.)**

- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Social Studies Certification Requirements (15 crs.)

- GEO 103 - Geography of the United States and Canada Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Political Science Elective (3 cr.)

- PLS 141 - World Politics Credits: 3 or
- PLS 200 or 300 level

### Note:

PLS 200 or 300 level: suggested courses are PLS 231, PLS 251, PLS 300

## Social Science Electives (6 cr. - Choose Two)

- ANT 111 - Cultural Anthropology Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- INT 200 - Introduction to International Studies Credits: 3
- GEO 200 or 300 level
- Any PHL course

## Specific General Education Courses for Certification (12+ crs.)

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). The courses may also simultaneously count toward the fulfillment of general education requirements.

## Required Professional Education Courses (33 crs.)

### Required Course

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 412 - Teaching Social Studies in Secondary Schools I Credits: 3
- EDU 413 - Teaching of Social Studies II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

### Note:

TCH 207 must be completed before EDU 412 and EDU 413

EDU 412 and EDU 413 must be taken simultaneously. A cumulative GPA of 3.0 is required to enroll in EDU 412 and EDU 413.

## Required Field Experience

Required: 50 Level I hours and PRAXIS I exam by the time one attains 75-90 credits. See B.S.Ed. advisor.

PRAXIS I & II are required for teacher certification.

## Minor

### History Minor

18 crs.

#### Required (9 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
  
- HIS 201 - Early History of the United States Credits: 3 or
- HIS 202 - Recent History of the United States Credits: 3

#### Electives (9 crs.)

- One course at the 300 level or above in Africa/Asia/Latin America
- One course at the 300 level or above in European History
- One course at the 300 level or above in American History

### Philosophy Minor

18 crs.

#### Required Courses

- PHL 248 - History of Ancient and Medieval Philosophy Credits: 3 or
- PHL 249 - History of Modern Philosophy Credits: 3
  
- PHL 340 - Contemporary Ethics Credits: 3
- PHL 200 level course: except PHL 248 or PHL 249
- PHL 300 level course
- PHL course at any level
- PHL course at any level

# Human Communication Studies Department

The Department of Human Communication Studies offers an undergraduate program leading to a Bachelor of Arts degree.

Both the major and minor in Human Communication Studies attempt to maximize a bank of communication skills and their theoretical bases, which are applicable to career goals and private lives. These skills include, but are not limited to, effective listening, interpersonal dynamics, group dynamics, critical analysis, persuasion, conflict management and resolution, and message construction and delivery, both orally and in writing. An emphasis on the ethical use of communication and the cultural dimensions, both of which are fundamental to effective human communicative strategies, are key to each course offered. Careful consideration is given to both the implications of human communication theories and the application of practical skill sets.

**Majors:** Must complete a total of 36 credits in the discipline. A core of 21 credits is required then the students select 15 credits of electives within the department.

**Minors:** Must complete a total of 18 credits in the discipline. A core of 6 credits is required and then students select 12 credits of electives within the department.

## *Human Communication Studies Features*

A personalized advisement procedure encourages students to make private appointments with advisors as necessary. These advising contacts help facilitate student choices, which ensure a timely approach to course selection and graduation goals. The advisement, while important to academic progression, is also fundamental to student preparation for careers.

Internships are an optional part of the Human Communication Studies program. They are tailored to the career plans of each student and provide access to those already working in those fields. In order to qualify for an internship, students must meet specified criteria and apply, formally, through their advisor.

## *Human Communication Studies Career Opportunities*

Human Communication Studies majors are prepared to enter virtually any field which requires communicative contact, in either spoken or written form. Recent graduates work in all aspects of sales, marketing, advertising, radio/television broadcast, public relations, human resources, and higher education. Many go on to continue their graduate studies.

Advisors encourage students to select and study in a minor area of concentration. Some good fits include business management, communications/journalism, elementary education, social work, and political science. The options are essentially limitless. The selection of minors advance career preparation in specific areas and reinforce student credentials for application to graduate study.

## **Bachelor of Arts**

### **Human Communication Studies, B.A.**

Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Required Courses (15 crs.)

- HCS 200 - Human Communication Theory Credits: 3
- HCS 210 - Public Speaking Credits: 3
- HCS 360 - Research Methods in Communication Credits: 3
- HCS 370 - Rhetorical Criticism Credits: 3
- HCS 400 - Senior Seminar Credits: 3

## Major Electives (21 crs.)

Students must take at least one course from each category (Rhetoric & Symbolism; Organizational Communication; Cultural Perspectives; and Interpersonal Communication) as well as an additional three classes from the course offerings and internship options below.

### Rhetoric and Symbolism

- HCS 325 - The Rhetoric of African-American Struggle and Progress Credits: 3
- HCS 345 - Environmental Communication Credits: 3
- HCS 352 - Argumentation & Debate Credits: 3
- HCS 356 - Persuasion Credits: 3
- HCS 363 - Political Rhetoric Credits: 3
- HCS 365 - Language and Meaning Credits: 3
- HCS 375 - Special Topics in Rhetoric and Symbolism Credits: 3

### Organizational Communication

- HCS 230 - Small Group Communication Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3
- HCS 350 - Theories of Organizational Communication Credits: 3
- HCS 351 - Special Topics Organizational Communication Credits: 3
- HCS 372 - Communication for Training and Instruction Credits: 3
- HCS 381 - Professional Communication and Multi-media Presentation Credits: 3

### Cultural Perspectives

- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- HCS 330 - Special Topics in Cultural Perspectives Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3

## Interpersonal Communication

- HCS 220 - Nonverbal Communication Credits: 3
- HCS 225 - Communication and Sport Credits: 3
- HCS 250 - Interpersonal Communication Credits: 3
- HCS 265 - Interviewing Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 349 - Special Topics in Interpersonal Communication Credits: 3
- HCS 385 - Resolving Conflict through Communication Credits: 3
- HCS 430 - Advanced Interpersonal Communication Credits: 3

## Internships

(Department Permission Required. Six credits of Internship may apply to major; three credits to Free Electives)

- HCS 390 - Internship I Credits: 3
- HCS 391 - Internship II Credits: 3
- HCS 392 - Internship III Credits: 3

## Minor

### **Human Communication Studies Minor**

#### Required Courses (6 crs.)

- HCS 210 - Public Speaking Credits: 3

#### Communication Research Core

- HCS 360 - Research Methods in Communication Credits: 3
- HCS 370 - Rhetorical Criticism Credits: 3

#### Rhetoric and Symbolism

- HCS 345 - Environmental Communication Credits: 3
- HCS 352 - Argumentation & Debate Credits: 3
- HCS 356 - Persuasion Credits: 3
- HCS 363 - Political Rhetoric Credits: 3
- HCS 365 - Language and Meaning Credits: 3
- HCS 375 - Special Topics in Rhetoric and Symbolism Credits: 3

#### Organizational Communication

- HCS 230 - Small Group Communication Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3

- HCS 350 - Theories of Organizational Communication Credits: 3
- HCS 351 - Special Topics Organizational Communication Credits: 3
- HCS 372 - Communication for Training and Instruction Credits: 3
- HCS 381 - Professional Communication and Multi-media Presentation Credits: 3

## Cultural Perspectives

- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- HCS 330 - Special Topics in Cultural Perspectives Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3

## Interpersonal Communication

- HCS 220 - Nonverbal Communication Credits: 3
- HCS 225 - Communication and Sport Credits: 3
- HCS 250 - Interpersonal Communication Credits: 3
- HCS 265 - Interviewing Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 349 - Special Topics in Interpersonal Communication Credits: 3
- HCS 385 - Resolving Conflict through Communication Credits: 3
- HCS 430 - Advanced Interpersonal Communication Credits: 3

## Interdisciplinary Arts Program

The Interdisciplinary Arts Program at Shippensburg University is the only one of its kind among the fourteen universities in the Pennsylvania State System of Higher Education. An ideal major for undergraduates who wish to acquire a comprehensive understanding of the arts and their interrelationships, the B.A. degree program in interdisciplinary arts offers course work in both arts performance and criticism across a broad range of media including computer design, sculpture, dance, music, theater, film, photography, and creative writing.

## Interdisciplinary Arts Features

Majors in Interdisciplinary Arts begin their studies by enrolling in a core of foundation courses that provide them with a general understanding of the arts, and they continue by enrolling in elective courses that offer in-depth study and practice in the arts, as well as other electives that suit their career goals, such as courses in education, business, and the social sciences. As a result, IA majors gain both a comprehensive knowledge of the arts and the critical and communicative skills necessary to succeed in their chosen professions.

## Career Opportunities

The rapid growth in multimedia technology has created a large market for people with a comprehensive foundation in the arts, as well as an ability to appreciate, interpret, and work with relationships among the arts. By combining courses

in art history and practice with courses featuring hands-on learning and marketable business skills, IA graduates enter the job market with a broad-based perspective and a unique combination of professional assets. Majors are provided with a foundation for careers not only in the performing arts, but also in professions such as arts education, journalistic criticism, media production services, museum programming and exhibition, arts management and fundraising, and government and community arts administration.

## Senior Capstone

The culmination of the Interdisciplinary Arts major is a Senior Capstone experience (6 credit hours). In the first semester of senior year, the IA major participates in a seminar (IAP 449 Interdisciplinary Arts Senior Thesis) designed to guide and encourage an individual research project resulting in a thesis paper with an interdisciplinary approach to the arts—a critical study of the influence of painting and music in a work of literature, for example, or an original screenplay, or an illustrated essay on the interaction of the arts in a certain film, opera, dance performance, or work of musical theater. The IAP senior thesis is an exciting opportunity for students to engage in research and creative thinking and to share their ideas with other IA majors.

The second semester of senior year offers Interdisciplinary Arts majors a choice. They may use the senior thesis as a foundation for designing a public performance (IAP 451 Interdisciplinary Arts Showcase), or undertake an internship in an arts-related organization (IAP 452 Interdisciplinary Arts Internship). The senior showcase can take many forms. It might be an illustrated lecture, an exhibition of work, a multimedia presentation, a reading of poetry or fiction accompanied by slides, a performance piece, or a short film, video, or work of computer animation. The internship can involve work in galleries or museums, with performance companies, on arts exhibitions, in the mass media, public relations, arts foundations, or other arts-related professions. Students opting for the senior showcase have the opportunity to display their work in a public forum, while those taking an internship can use the experience as a springboard for professional employment in the arts industry.

## Bachelor of Arts

### Interdisciplinary Arts, B.A.

#### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Foundation Courses

(which will also satisfy a General Education Category B (Humanities) requirement)

- IAP 111 - Introduction to Interdisciplinary Arts Credits: 3 (which will also satisfy a General Education Category B (Humanities) requirement)

## One of the Following Courses:

(which will also satisfy a General Education Category B: Literature requirement)

- ENG 243 - The Art of the Film Credits: 3



- ENG 250 - Introduction to Literature Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3

## Three of the Following Courses:

(One of these (except COM 111) will satisfy the General Education Category B: Humanities requirement, and the remaining two can be counted either as electives or in the primary or secondary concentrations of the curriculum track.)

- ART 101 - Art Appreciation Credits: 3
- COM 111 - Introduction to Mass Communication Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- THE 121 - Introduction to the Theatre Credits: 3

## Curriculum Track (42 crs.)

Interdisciplinary Arts majors choose a primary concentration consisting of 6 courses (18 crs.) and two secondary concentrations of 4 courses (each 12 crs.). The primary concentration and at least one of the secondary concentrations must be in the arts, although one of the secondary concentrations can be in a discipline outside of the arts.

An IA major wishing to concentrate in musical theatre, for example, might choose theatre as a primary concentration and music and dance as secondary concentrations; a student interested in art therapy might choose art as a primary concentration and psychology as one of the secondary concentrations; a student whose interest is in graphic fiction might combine courses in art, computer design, and creative writing; while a student interested in arts management could combine course work in two of the arts with courses in marketing and business. One of the most attractive features of the IA major is its flexibility, and the opportunity it offers students to design a curriculum suited to their personal interests and career goals. It also enables students to earn minors in their fields of concentration.

In the curriculum track, majors are also required to take one course in each of the following areas: A. History and Culture, B. Theory and Criticism, C. Arts Praxis, and D. Professional Skills. A list of the many courses offered by arts departments that satisfy this requirement is provided to majors, and with permission of the program director, courses in other colleges or departments, special topics courses, internships, or individualized instruction may also satisfy these category requirements.

## Senior Capstone (6 crs.)

- IAP 449 - Interdisciplinary Arts Senior Thesis Credits: 3
- IAP 451 - Interdisciplinary Arts Showcase Credits: 3 or
- IAP 452 - Interdisciplinary Arts Internship Credits: 3 or
- IAP 453 - Interdisciplinary Arts Internship Credits: 3

## International Studies Program

## International Studies Program

International Studies prepares students for the challenges of an ever-changing, interdependent world. It is an interdisciplinary program that enhances knowledge of the countries and cultures of the world as well as the forces of globalization knitting them together. The program offers an International Studies major (39 crs.), International Studies

minor (21 crs.), and four different Areas Studies certificates (12 crs. each) in African & Middle Eastern Studies, Asian Studies, European Studies, and Latin American & Caribbean Studies. Students create programs of study tailored to their academic interests and career aspirations from an interdisciplinary array of courses on international topics. Graduates are prepared to cross into other cultures and navigate the global networks connecting the world's economies, governments, and societies.

## International Studies Career Opportunities

International Studies graduates typically find employment in business, the federal government, international agencies, and social service, educational and media organizations. Businesses need employees who can operate in a multinational environment because exports, imports and tourism contribute substantially to the U.S. and Pennsylvania economies. Federal agencies, such as the FBI and State Department, and non-profit organizations, such as the Red Cross and UNICEF, require employees with the intercultural and linguistic competency needed to interact with foreign governments and peoples.

## Bachelor of Arts

### International Studies, B.A.

Required courses INT 200 - Introduction to International Studies Credits: 3 and INT 300 - International Studies Seminar Credits: 3 introduce and reinforce knowledge of globalization and intercultural relations. Majors also are required to study abroad or engage in an off-campus internship that develops intercultural competency and international understanding.

Students must elect one Global Perspectives concentration (12 crs.) in:

1. Comparative & Global Cultures
2. Global Political Relations *or*
3. Global Business & Economics.

Global Perspectives courses explore globalization's impacts on the cultures, economies, and political systems of the world that cause international interdependency and tensions.

Students also must elect one Area Studies concentration (12 crs.) and related foreign language (9 crs.) in:

1. African & Middle Eastern Studies,
2. Asian Studies,
3. European Studies *or*
4. Latin American & Caribbean Studies.

Area Studies and Foreign Language courses promote intercultural and linguistic competency essential to successful cross-cultural personal and professional relationships.

Majors must take a minimum of 21 credit hours of major courses, including INT 200 and INT 300, at Shippensburg. Students declaring dual majors may double-count a maximum of 12 credit hours of courses between the first major and courses fulfilling International Studies Global Perspectives, Area Studies and Foreign Language requirements. Courses fulfilling general education requirements of both majors may be double-counted without restriction.

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

39 crs.

### Required Courses (6 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- INT 300 - International Studies Seminar Credits: 3

#### Note:

\*HON 399 - Honors: Independent Study Credits: 3 may serve as a substitute for INT 300 with an appropriate international topic, interdisciplinary research project, and permission of the director.

### Foreign Language Requirement (9 crs.)

Majors taking languages offered through Shippensburg University must complete 9 credit hours at the 200-level and higher. Students who study a language not offered through Shippensburg University--such as Korean, Russian or Swahili--are required to earn a total of 9 credit hours at the 100-level or higher. Language credits must be earned through Shippensburg University or with permission of the director another accredited institution of higher learning in the U.S. or abroad. Students are strongly encouraged to strengthen their qualifications for international employment by completing a modern language certificate (12 crs.) or minor (18 crs.).

## Study Abroad or Internship Requirement

Majors are required to study abroad or engage in an off-campus internship. The study abroad or internship experience must satisfy a minimum of 3 credit hours of the major's general education or course requirements. Students studying abroad at an approved program may take a maximum of 18 credit hours of major courses. Majors studying abroad to fulfill special academic needs may obtain exemptions from the minimum or maximum credit hour requirement with prior approval of the Director of International Studies.

### General Education Requirements (12 crs.)

**All majors must complete the following general education courses:**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- ANT 111 - Cultural Anthropology Credits: 3 or
- GEO 140 - Cultural Geography Credits: 3

### Comparative and Global Culture and Global Political Relations

Majors with concentrations in Comparative and Global Culture and Global Political Relations must take these two Category D courses:

- GEO 101 - World Geography Credits: 3
- PLS 141 - World Politics Credits: 3

## Business and Economics Concentration

Majors with the Business and Economics Concentration must choose Category D courses from each of the following two choices:

- ECO 101 - Principles of Macroeconomics Credits: 3 or
- ECO 102 - Principles of Microeconomics Credits: 3 or
- ECO 113 - Principles of Economics Credits: 4
  
- GEO 101 - World Geography Credits: 3 or
- PLS 141 - World Politics Credits: 3

## Global Perspectives Concentration (12 crs.)

Students must choose one Global Perspectives Concentration. 6 credit hours should be at the 300-level or higher. Courses must be in at least 2 disciplines.

## Comparative and Global Cultures Concentration

- ANT 105 - Great Discoveries in Archaeology Credits: 3
- ANT 211 - Comparative Cultures Credits: 3
- ANT 220 - Anthropology for International Studies Credits: 3
- ANT 305 - Food, Drink and Culture Credits: 3
- ANT 310 - Magic, Science and Religion Credits: 3
- ANT 312 - Comparative Marriage and Family Credits: 3
- ANT 320 - Comparative Gender Roles Credits: 3
- ANT 350 - Medical Anthropology Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 233 - Art History III Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3
- ENG 240 - Global Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HIS 407 - Women in Comparative Perspective Credits: 3
- INT 190 - General Education Special Topics Credits: 3
- INT 280 - Selected Topics in International Studies: Comparative & Global Cultures Credits: 3-6
- INT 380 - Selected Topics in International Studies Comparative & Global Cultures Credits: 3-6
- INT 390 - International Studies Internship - Comparative & Global Cultures Credits: 3-6
- MUS 261 - World Music Credits: 3
- PHL 295 - Comparative Religions Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 265 - Global Society Credits: 3
- SOC 421 - Impact of International Migration Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Global Political Relations Concentration

- CRJ 411 - Terrorism Credits: 3
- CRJ 463 - Comparative Criminal Justice Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 351 - World History since 1945 Credits: 3
- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- INT 281 - Selected Topics in International Studies: Global Political Relations Credits: 3-6
- INT 381 - Selected Topics in International Studies Global Political Relations Credits: 3-6
- INT 391 - International Studies Internship - Global Political Relations Credits: 3-6
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 349 - Applied Diplomacy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 394 - Selected Topics in International Politics Credits: 3
- SOC 365 - Elites in Society Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Global Business and Economics Concentration

- ECO 321 - International Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- GEO 230 - Economic Geography Credits: 3
- INT 282 - Selected Topics in International Studies Global Business & Economics Credits: 3-6
- INT 382 - Selected Topics in International Studies Global Business & Economics Credits: 3-6
- INT 392 - International Studies Internship - Global Business & Economics Credits: 3-6
- MGT 349 - International Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 470 - International Management Credits: 3
- MKT 360 - International Marketing Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

### Note:

\*\*Students taking FIN 425, MGT 349, and MKT 360 are required to elect a Business Minor-18 crs. in order to meet required prerequisites.

## Area Studies Concentration (12 crs)

Students must choose one Area Studies concentration. 6 credit hours should be at the 300-level or higher. Courses must be in at least two disciplines.

*\* Requires an appropriate topic and an Exception Form signed by Director of International Studies for approval.*

## African and Middle Eastern Studies Concentration

Arabic, French or another African or Middle Eastern language is required to fulfill the language requirement. Study abroad in Africa or the Middle East is highly recommended.

- \* ENG 385 - Studies in Postcolonial Literature Credits: 3
- FRN 150 - French Civilization Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HIS 339 - The Central Islamic Lands, 500-1700 Credits: 3
- HIS 344 - History of the Modern Middle East Credits: 3
- HIS 376 - History of Africa South of the Sahara Credits: 3
- INT 283 - Selected Topics in International Studies Africa & Middle East Studies Credits: 3-6
- INT 383 - Selected Topics in International Studies Africa & Middle East Studies Credits: 3-6
- INT 393 - International Studies Internship - African & Middle Eastern Studies Credits: 3-6

### Note:

ENG 385, GEO 415 and GEO 450 required approval of the Director

FRN 204 and FRN 331-Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the course listings for language prerequisites

## Asian Studies Concentration

An Asian language is required to fulfill the language requirement. Study abroad in Asia is highly recommended.

- \* ENG 385 - Studies in Postcolonial Literature Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HCS 315 - Asian-American Communication Credits: 3
- HIS 350 - History of Modern Japan Credits: 3
- HIS 353 - Modern Southeast Asia Credits: 3
- HIS 354 - Traditional China Credits: 3
- HIS 355 - History of Modern China Credits: 3
- HIS 454 - China and the Outside World Credits: 3
- INT 284 - Selected Topics International Studies Asian Studies Credits: 3-6
- INT 384 - Selected Topics in International Studies Asian Studies Credits: 3-6
- INT 394 - International Studies Internship - Asian Studies Credits: 3-6

- PHL 336 - Concepts in Buddhism Credits: 3

## Note:

ENG 385, GEO 415 and GEO 450 require approval of the Director

## European Studies Concentration

French, German, Spanish or another continental European language is required to fulfill the requirement. Study abroad in Europe is highly recommended.

- ANT 351 - Peoples and Cultures of Europe Credits: 3
- ENG 236 - British Literature I Credits: 3
- ENG 237 - British Literature II Credits: 3
- ENG 318 - Studies in English Renaissance Literature Credits: 3
- \* ENG 337 - Romanticism Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- \* ENG 377 - The Long 18th Century Credits: 3
- \* ENG 380 - 19th Century Literature Credits: 3
- FRN 150 - French Civilization Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 320 - French for the Professions Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 340 - Genres Littéraires Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GER 150 - German Civilization and Culture Credits: 3
- GER 151 - German Cinema Credits: 3
- GER 204 - Contemporary German Culture Credits: 3
- GER 215 - German for the Professions Credits: 3
- GER 320 - Berlin Credits: 3
- GER 322 - Readings in German Literature Credits: 3
- GER 400 - German Seminar Credits: 3
- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 325 - History of the Tsarist Russia Credits: 3
- HIS 326 - History of the U.S.S.R. Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3
- HIS 332 - English History: 1066 to Present Credits: 3
- HIS 334 - Europe 1715-1815: The Era of the Industrial and French Revolutions Credits: 3
- HIS 337 - History of the Byzantine Empire Credits: 3
- HIS 348 - The History of Ancient Rome Credits: 3

- HIS 356 - History of 19th Century Europe Credits: 3
- HIS 357 - History of Holocaust Credits: 3
- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- HIS 361 - History of 20th Century Europe Credits: 3
- HIS 362 - Europe 1450-1715: The Era of the Renaissance and Reformation Credits: 3
- HIS 423 - Issues in 20th-Century Europe Credits: 3
- INT 285 - Selected Topics in International Studies European Studies Credits: 3-6
- INT 385 - Selected Topics in International Studies European Studies Credits: 3-6
- INT 395 - International Studies Internship - European Studies Credits: 3-6
- MUS 320 - Masterpieces of Music Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 330 - Spanish for the Professions Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 385 - Aspectos De La Civilización Hispana Credits: 3
- SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature Credits: 3

## Note:

GEO 415 and GEO 450 require approval of the Director

FRN 204, FRN 320, FRN 330, FRN 340, FRN 380, FRN 392, FRN 400, GER 151, GER 215, GER 320, GER 322, GER 400, SPN 204, SPN 330, SPN 343, SPN 360, SPN 385, SPN 400-Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the Course Descriptions for language prerequisites

## Latin American and Caribbean Studies Concentration

Spanish, French, or another Latin American or Caribbean language is required to fulfill the language requirement. Study abroad in Latin America or the Caribbean is highly recommended.

- ANT 360 - Aztec and Maya Archaeology Credits: 1-3
- GEO 308 - Geography of Latin America Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HIS 349 - History of Latin America Credits: 3
- HIS 360 - History of Mexico Credits: 3
- HIS 366 - History of Brazil Credits: 3
- INT 286 - Selected Topics in International Studies Latin American & Caribbean Studies Credits: 3-6
- INT 386 - Selected Topics in International Studies Latin American & Caribbean Studies Credits: 3-6
- INT 396 - International Studies Internship - Latin American & Caribbean Studies Credits: 3-6
- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3



- PLS 349 - Applied Diplomacy Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 330 - Spanish for the Professions Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3
- SPN 385 - Aspectos De La Civilización Hispana Credits: 3
- SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature Credits: 3

### Note:

GEO 415 and GEO 450 require approval of the Director

SPN 204, SPN 330, SPN 361, SPN 385, SPN 400 -Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the Course Descriptions for language prerequisites.

## Certificate

### African & Middle Eastern Studies Certificate

#### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

#### Electives (9 crs.)

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

### Asian Studies Certificate

#### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

#### Electives (9 crs.)

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## **European Studies Certificate**

### **Required (3 crs.)**

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

### **Electives (9 crs.)**

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## **Latin American Studies Certificate**

### **Required (3 crs.)**

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

### **Electives (9 crs.)**

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## Minor

### International Studies Minor

The International Studies minor can be paired with many different majors including those in business, education and science. The minor has required courses (6 crs.) that provide an overview of international studies. Core courses (6 crs.) and elective courses (9 crs.) give students flexibility to pursue their own international interests. Study abroad and foreign language learning are highly encouraged, but not required. Study abroad courses may be applied to a maximum of 15 credit hours of minor requirements. Students must take INT 200 and INT 300 at Shippensburg University.

21 crs.

#### Required (6 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- INT 300 - International Studies Seminar Credits: 3

#### Core courses (6 crs.)

- ANT 220 - Anthropology for International Studies Credits: 3
- MGT 370 - International Business Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 141 - World Politics Credits: 3

#### Electives (9 crs.)

The remaining three courses may be selected from a wide range of offerings in many departments. Electives need to be in at least two disciplines. Two of the elective courses must be at the 300-level or higher. Courses used to meet the core course requirement cannot double count as minor electives. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

## Mathematics Department

The Department of Mathematics offers a Bachelor of Science (B.S.) degree with either a general program of study or one of three different concentrations: applied mathematics, secondary education certification, and statistics. The Secondary Education Certification Concentration includes the requirements necessary for official certification for teaching mathematics at the secondary level.

The latest technology is increasingly brought into the classroom to teach mathematics in a modern fashion. Faculty advisors work closely with students to help them prepare for careers in the mathematical sciences. We invite interested students to examine the department's website at [www.ship.edu/math](http://www.ship.edu/math).

## Mathematics Career Opportunities

Careers in the mathematical sciences, such as actuary, mathematician, statistician, or operations researcher are consistently rated among the best in terms of income, job security, and work environment. A wide variety of career opportunities exist in private industry, business, government, science, and education.

## **Bachelor of Science**

### **Mathematics, B.S.**

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

### **Concentrations**

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

### **Allied Electives**

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

### **Required Mathematics (30 crs.)**

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

### **Required Computer Science (3-4 crs.)**

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1  
(CSC 106 can be taken in place of CSC 107)

## B.S. without concentration (24 - 27 crs.)

- MAT3xx or 4xx elective
- MAT3xx or 4xx elective
- MAT3xx or 4xx elective
- MAT4xx elective
- MAT4xx elective
- Three-Allied-Electives

Three Allied Electives may be replaced by a minor/second major in any discipline.

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## Mathematics, Applied Math Concentration, B.S.

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

## Concentrations

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

## Allied Electives

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

## Required Mathematics (30 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

## Required Computer Science (3-4 crs.)

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1  
( CSC 106 can be taken in place of CSC 107 )

## Applied Math Concentration (24-27 crs.)

- MAT 322 - Differential Equations Credits: 3
- MAT 326 - Mathematical Modeling Credits: 3

## One of

- MAT 410 - Numerical Analysis Credits: 3
- MAT 422 - Partial Differential Equations Credits: 3
- MAT 476 - Probability Credits: 3
- MAT 491 - Topics in Applied Mathematics Credits: 3

## Applied Math Elective:

- MAT 3xx/4xx elective
- MAT 4xx elective
- Three Allied Electives \*\*

## Note:

\*\*Allied Electives may be replaced by a minor/second major in any discipline

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## **Mathematics, Secondary Education Certification, B.S.**

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

## Concentrations

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

## Allied Electives

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

## Required Mathematics (30 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

## Required Computer Science (3-4 crs.)

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 CSC 106 can be taken in place of CSC 107 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Secondary Education Certification (45 crs.)

- MAT 326 - Mathematical Modeling Credits: 3
- MAT 333 - Geometry Credits: 3
- MAT 400 - History of Mathematics Credits: 3
- MAT 4xx - elective



## Professional Sequence

- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 371 - Technology in the Mathematics Classroom Credits: 3
- EDU 434 - Teaching of Mathematics in the Secondary Schools I Credits: 3
- EDU 435 - Teaching of Mathematics in the Secondary Schools II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## Mathematics, Statistics Concentration, B.S.

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

## Concentrations

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

## Allied Electives

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

## Required Mathematics (30 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

## Required Computer Science (3-4 crs.)

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 or can be taken in place of CSC 107 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Statistics Concentration (24-27 crs.)

- MAT 317 - Statistics II Credits: 3
- MAT 476 - Probability Credits: 3
- MAT 486 - Mathematical Statistics Credits: 3
- MAT 3xx/4xx Elective
- MAT 3xx/4xx Elective
- Three Allied Electives

Note:

Allied Electives may be replaced by a minor/second major in any discipline

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## Mathematics and Special Education Certification, B.S.

Students completing this dual certification program are eligible to teach in both a mathematics classroom and a special education classroom thereby broadening their job prospects and distinguishing them from the general student population. In addition, as a traditional classroom math teacher, graduates would have the training necessary for effectively dealing with classes in which high numbers of students have Individual Education Plans (IEPs).

A serious national shortage of mathematics (grades 7-12) and special education (Pre-K-12) teachers exists; by 2020 this shortage is expected to reach a critical level, especially in mathematics and science. (U.S. Department of Education, March 2015, *Teacher Shortage Areas Nationwide Listing*). Dual certification will cultivate a new creative student audience filling the state-wide deficit of students situated to excel in special education mathematics classrooms further fulfilling the growing workforce needs.

### Core Courses (33-34 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
  - MAT 211 - Calculus I Credits: 4
  - MAT 212 - Calculus II Credits: 4
  - MAT 213 - Calculus III Credits: 4
  - MAT 217 - Statistics I Credits: 4
  - MAT 225 - Discrete Mathematics Credits: 4
  - MAT 318 - Elementary Linear Algebra Credits: 3
  - MAT 320 - Introduction to Abstract Algebra Credits: 3
  
  - MAT 430 - Complex Analysis Credits: 3
- OR

- MAT 441 - Real Analysis I Credits: 3
- CSC 104 - Programming in Python Credits: 3  
OR
- CSC 180 - Microcomputer Basic Credits: 3  
OR
- CSC 110 - Computer Science I - Lecture Credits: 3 AND
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Secondary Education Certification (45 crs.)

- MAT 326 - Mathematical Modeling Credits: 3
- MAT 333 - Geometry Credits: 3
- MAT 400 - History of Mathematics Credits: 3  
MAT 4XX Elective
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EDU 371 - Technology in the Mathematics Classroom Credits: 3
- EDU 434 - Teaching of Mathematics in the Secondary Schools I Credits: 3
- EDU 435 - Teaching of Mathematics in the Secondary Schools II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15  
Two separate placements - one Math, one Special Education

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Special Education Courses (21 crs.)

- EEC 280 - Best Practices in Collaboration: Educators, Families, & Related Service Providers Credits: 3
- EEC 320 - Interventions for Students with Communication Impairments Credits: 3
- EEC 325 - Interventions for Students with Social/Emotional and Behavioral Impairments Credits: 3
- EEC 330 - Teaching Students with Exceptionalities in a Standards-Aligned System Credits: 3
- EEC 335 - Interventions for Students with Cognitive and/or Physical Impairments Credits: 3
- EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 546 Transition to Adult Life for Students with Disabilities

## Minor

### Mathematics Minor

18-21 crs.

The mathematics minor consists of six courses. With two possible exceptions, all six courses must be at or above the 200 level, and at least two of the courses must be at or above the 300 level. The two exceptions are as follows:

1. MAT 181 may be taken in place of (but not in addition to) MAT 211 for credit toward the minor; however, doing so may restrict your access to some upper-level math courses; and
2. MAT 117 may be taken in place of (but not in addition to) MAT 217 for credit toward the minor.

## Data Science Minor

### Required Courses (16-17 crs.)

- CSC 104 - Programming in Python Credits: 3  
OR
- CSC 110 - Computer Science I - Lecture Credits: 3  
OR
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MAT 217 - Statistics I Credits: 4
- MAT 219 - Data Science I Credits: 3
- MAT 317 - Statistics II Credits: 3
- MAT 319 - Data Science II Credits: 3

### Discipline-Specific Research Course (2-4 crs.)

Complete 1 of the following:

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- COM 432 - Public Relations Research and Campaigns Credits: 3
- CSC 499 - Senior Research and Development Credits: 2
- ECO 333 - Research and Analysis in Economics Credits: 3
- ESC 353 - Research Design and Statistics for Exercise Science Credits: 4
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- HCS 360 - Research Methods in Communication Credits: 3
- HIS 386 - History Research Seminar Credits: 3
- MKT 430 - Marketing Research Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PSY 301 - Experimental Psychology Credits: 3
- SCM 481 - Decision Models for Supply Chain Management Credits: 3
- SOC 385 - Introduction to Social Research Credits: 3
- SWK 360 - Research Techniques for Social Workers Credits: 3
- SWK 462 - Seminar in Social Work Methods Credits: 3

# Modern Languages Department

The study of modern languages at Ship prepares students in interpersonal communication, interpretive listening, interpretive reading, oral and written presentations in French, German or Spanish. Students also study the culture and literature of foreign countries including their products, practices and perspectives. Our world languages curriculum strengthens critical thinking skills and global and intercultural awareness.

Modern languages majors or minors complete courses in conversation, writing, grammar, phonetics, culture, and literature in the chosen language. All courses are designed following the American Council on the Teaching of Foreign Languages (ACTFL) National Standards and they are conducted in the target language.

The Department of Modern Languages has a 35-position computerized multimedia audio-video language learning center for both classroom sessions and individual work. Some of the computers are equipped with Webcams and Skype to facilitate live interactions with native speakers. Practicing in a multimedia center accelerates students' learning process and transforms the most tedious aspects of language learning into an enjoyable experience. Both the department and Ezra Lehman Library maintain an excellent collection of books, magazines, maps, and DVDs on the language, literature, and culture of foreign countries.

Students have had internships in social service agencies, museums, businesses, community organizations, and government. Graduates have entered a variety of careers such as teaching, business, government, social service, public health, international relations, translation and interpretation for private and public entities, travel agencies, advertising, and others.

Students who wish to study abroad will find that there are many opportunities available. French and Spanish majors are especially encouraged to study at least one semester in a country of their language. Our majors and minors have studied in a number of foreign countries, chosen according to their own particular interests. Study abroad is highly encouraged but not required for the minor.

Outside the classroom, students can become involved with the French/francophone, German, and Spanish Clubs, which plan activities such as foreign language films and field trips. All three clubs offer academic support as well as cultural events. The French and Spanish Honorary Societies are organizations that recognize and honor students who have attained outstanding academic achievement. The department also provides a multilingual web page that features student production.

## Department Goals and Learning Outcomes

In an effort to assist the University in achieving its educational mission, the Department of Modern Languages has set out the following general goals:

- Cultivate the students' learning of foreign languages (French, German, and Spanish) and their culture by implementing integrative strategies that enable the students to use the foreign language as a communicative tool to gain knowledge of the world.
- Promote intellectual development by encouraging the students to interpret, analyze and synthesize master pieces and contemporary works of literature in foreign languages.
- Strengthen the students' professional opportunities upon completion of their studies by fostering the notion of the bilingual intellectual as a mechanism of success in the global market of the 21st century.

The Modern Languages Department adheres to the philosophy of the American Council on the Teaching of Foreign Languages (ACTFL). The Foreign Language Education programs in K-12 French and Spanish are accredited and Nationally Recognized by ACTFL/NCATE.

## Student Learning Outcomes (SLOs)

1. Communicate thoughts, ideas, and opinions orally in the target language at the Novice-High level minimum (students in foreign language as a graduation requirement), Intermediate-Low level minimum (students in the minor), and Advanced-Low level minimum (students in the major or in the teacher certification program) as described by the American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines.
2. Communicate thoughts, ideas, and opinions in writing in the target language at the Novice-Low level minimum (students taking a foreign language as a requirement), Intermediate-Low level minimum (students in the minor), and Advanced-Low level minimum (students in the major or in the teacher certification program) as described by the American Council on the Teaching of Foreign Languages (ACTFL).
3. Recognize distinctive products and practices of the target culture and establish relationships between these and the perspectives (attitudes, values and beliefs) of the target culture.
4. Identify, synthesize, analyze and present bibliographical information in the form of an original research paper in the target language.

## **Student Learning Outcomes Pertaining to Foreign Language Education**

1. Discuss the teaching/learning process in world language education (PA-SUCOE-CF 5; ACTFL/NCATE 1.a; 3.a).
2. Recognize the main components and teaching principles of seminal language teaching approaches (PA-SUCOE-CF 2.5; ACTFL/NCATE 3.a).
3. Use the National Standards for world language learning, the ACTFL K-12 Standards and the state standards as a framework for foreign language teaching planning and the assessment of learning (PA-SUCOE-CF 2.3; ACTFL/NCATE 4).
4. Design and implement standards-based and communicative-oriented lessons that include the three communicative modes: Interpretive, Interpersonal, and Presentational (PA-SUCOE-CF 2.3; ACTFL/NCATE 4).
5. Develop and implement effective assessment instruments/protocols (including Dynamic Assessment) to evaluate the three communicative modes (PA-SUCOE-CF 4; ACTFL 5).
6. Create and/or modify instructional materials to suit the needs of specific learning populations (PA-SUCOE-CF 1; ACTFL/NCATE 3.b)
7. Report assessment results to the class (PA-SUCOE-CF 2.7; ACTFL/NCATE 5.c).
8. Create and/or modify instructional material to connect other areas of the school curriculum with second language learning (PA-SUCOE-CF 1; ACTFL/NCATE 2.c).
9. Use technology as a tool to enhance the students' learning experience (PA-SUCOE-CF 3; ACTFL/NCATE 1 and 3).

## **Placement System**

The department has a placement plan designed for students who already have some knowledge of Spanish, French or German and want to take upper-level courses or to receive credit by examination for certain courses. Please contact the department chair for placement in these courses.

Students with three or more years of high school language study are advised NOT to take a 101, 102, or 103 courses in that same language. These students should take a 200-level course. Contact the department chair to discuss the appropriate placement.

## **Bachelor of Arts**

### **French, B.A.**

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**(36 crs.)**

All courses required for the French major are taught in French. Courses numbered below French 200 do not count for the major.

## Required French (30 crs.)

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3
- FRN 316 - Composition and Stylistics Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3
- FRN 340 - Genres Litteraires Credits: 3

## French Electives (6 crs.)

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

## Note:

French majors and minors are strongly urged to take history, political science, and geography courses that deal with French-speaking countries.

## **French with Secondary Certification, B.A.**

All courses required for the French major are taught in French. Courses numbered below French 200 do not count for the major. Professional Education courses offered by other departments are taught in English. This program is nationally recognized by ACTFL/NCATE.

## Note:



All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Required (30 crs.)

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3
- FRN 316 - Composition and Stylistics Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3
- FRN 340 - Genres Littéraires Credits: 3

## French Electives (6 crs.)

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

### Note:

French majors and minors are strongly urged to take history, political science, and geography courses that deal with French-speaking countries.

## Required Professional Education Courses (30 crs.)

### If planning to teach French

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). If any exceptions are made, they must be approved by the Teacher Education Office. Other requirements for teacher certification are available from the Department of Modern Languages.

## Dual Certification French and Another Field

Students planning to teach will find it to their advantage to work for dual certification in two modern languages, a modern language and English, or a modern language and another field. To achieve dual certification a student must have the approval of both departments involved, complete the normal requirements for a major in the primary area of interest and a 30-hour sequence in the secondary area of specialization, plus appropriate courses in the methodology and student teaching in both areas.

## Spanish, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**(36 crs.)**

All courses required for the Spanish major are taught in Spanish. Courses numbered below Spanish 200 do not count for the major.

### Required Spanish (30 crs.)

- SPN 202 - Intermediate Conversation Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 302 - Advanced Spanish Conversation Credits: 3
- SPN 309 - Spanish Phonetics Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3
- SPN 313 - Advanced Composition and Stylistics Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3

### Spanish Electives (6 crs.)

Two additional Spanish courses—at least one at the 300 level or above; at least one at the 400 level.

Spanish majors and minors are strongly urged to take history, political science, and geography courses that deal with Spanish-speaking countries.

## Spanish with Secondary Certification, B.A.

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## (36 crs.)

All courses required for the Spanish major are taught in Spanish. Courses numbered below Spanish 200 do not count for the major. Professional Education courses offered by other departments are taught in English. This program is nationally recognized by ACTFL/NCATE.

## Required Spanish (30 crs.)

- SPN 202 - Intermediate Conversation Credits: 3  
OR
- SPN 215 - Intermediate Spanish For Heritage and Native Speakers Credits: 3
  
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 302 - Advanced Spanish Conversation Credits: 3
- SPN 309 - Spanish Phonetics Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3
- SPN 313 - Advanced Composition and Stylistics Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3

## Spanish Electives (6 crs.)

Two additional Spanish courses—at least one at the 300 level or above; at least one at the 400 level

Spanish majors and minors are strongly urged to take history, political science, and geography courses that deal with Spanish-speaking countries.

## Required Professional Education Courses (30 crs.)

### If planning to teach Spanish

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## Note:

\* Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). If any exceptions are made, they must be approved by the Teacher Education Office. Other requirements for teacher certification are available from the Department of Modern Languages.

## Dual Certification Spanish and Another Field

Students planning to teach will find it to their advantage to work for dual certification in two modern languages, a modern language and English, or a modern language and another field. To achieve dual certification a student must have the approval of both departments involved, complete the normal requirements for a major in the primary area of interest and a 30-hour sequence in the secondary area of specialization, plus appropriate courses in the methodology and student teaching in both areas.

## Certificate

### French Certificate

12 crs.

Select four courses from the major. Courses selected by advisement.

### Translation In French Certificate

In order to be admitted directly to the Translation in French certificate program at Shippensburg University, students need to have reached the Advanced Low proficiency level in French according to ACTFL guidelines. Students who have not scored at that level will need appropriate training in the areas of language, literature and culture and to this effect complete the core courses in French (24 credits). Once admitted in the Translation in French certificate program, students complete 12 credits in French. In parallel, students also need to complete a minimum of 18 credits in a subject area specialty outside of French to demonstrate deeper knowledge of one or more disciplines outside the linguistics area.

### Language/Culture Core (24 crs )

These courses provide students with the linguistic and cultural tools to enable them to successfully function as a mediator between two cultures

### Required French (24 crs.)

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3

- FRN 316 - Composition and Stylistics Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3  
OR
- FRN 331 - Masterpieces of Francophone Literature Credits: 3  
OR
- FRN 340 - Genres Litteraires Credits: 3

## Translation Specialization Courses: (12 crs.)

- FRN 320 - French for the Professions Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- Special Topics/Internship Focused on Translation (300 or 400 level)

## German Certificate

12 crs.

Select four courses from the minor. Courses selected by advisement.

## Spanish Certificate

12 crs.

Select four courses from the major. Courses selected by advisement.

## Translation in Spanish Certificate

Students must be a Spanish major to pursue this certificate.

## Translation Specialization Courses: (9 crs.)

- SPN 330 - Spanish for the Professions Credits: 3
- SPN 420 - Theory and Practice of Translation Credits: 3
- SPN 425 - Advanced Oral Interpreting Credits: 3

### Note:

Subject Area Specialty Courses: Because translation today requires that translators specialize in one or more areas, we ask that students in the Translation Specialization Program bring together their linguistic skills in Spanish and the knowledge and skills they developed in the other disciplines taught at Shippensburg University. Students can either select a single subject area (that of their major/minor is acceptable, provided that they are not completing a Spanish major/minor) or a combination of relevant courses approved by the Translation Specialization Coordinator.

Possible specialties include, but are not limited to the following: Accounting, Communication/Journalism, Biology, Business, Chemistry, Computer Science, Criminal Justice, Earth Science, Economics, Finance, Geography, Geology, International Studies, Management Information Systems, Marketing, Mathematics, Physics, Political Science, Public Relations.

## Minor

### French Cultural Studies Minor

This minor is interdisciplinary and has less of a focus on language than the standard French minor and more on the culture, taught in English. The minor is to be capped with a summer course in Quebec for culture and language immersion or with the double seminar with service learning in Haiti during the Winter Break.

18 crs.

#### Required (12 crs.)

12 credits of core courses in French.

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3

#### Option A (Quebec):

Includes two courses below, one of which is a summer course taught in Quebec, in English.

- FRN 300 - Advanced French Conversation Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3

#### Option B (Haiti):

Includes two courses below with service learning in Haiti taught over the winter break, taught in English or French.

- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

#### Interdisciplinary courses in English (6 crs.)

Two courses are chosen from the list to suit the interests of the students:

- ANT 220 - Anthropology for International Studies Credits: 3
- ART 233 - Art History III Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- ENG 240 - Global Literature Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 305 - Geography of Europe Credits: 3

- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3
- MUS 261 - World Music Credits: 3

## **French Minor**

All courses required for the French minor are taught in French. Courses numbered below French 200 do not count for the minor.

**18 crs.**

### **Required (12 crs.)**

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 309 - French Grammar Credits: 3

### **Electives (6 crs.)**

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

## **German Studies Minor**

Not all courses required for the German Studies Minor are taught in German.

**18 crs.**

### **Required (12 crs.)**

#### **One of the following 100-level German Courses**

- GER 150 - German Civilization and Culture Credits: 3
- GER 151 - German Cinema Credits: 3

#### **One of the following 200-level German Courses**

- GER 203 - Intermediate German Communication Credits: 3
- GER 204 - Contemporary German Culture Credits: 3

### One of the following 300-level German Courses

- GER 309 - German Phonetics Credits: 3
- GER 320 - Berlin Credits: 3

### One of the following 300-Level German Grammar or Composition Course

- GER 312 - German Grammar Credits: 3
- GER 313 - Composition and Stylistics Credits: 3

### Electives (6 crs.)

Two additional 200- to 400-level German courses not already taken as required courses. OR courses from the list below in agreement with the director of the German Studies Minor and the instructor of the course.

- ANT 351 - Peoples and Cultures of Europe Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 357 - History of Holocaust Credits: 3
- PHL 105 - Ethical Theories and Problems Credits: 3

## Spanish Minor

All courses required for the Spanish minor are taught in Spanish. Courses numbered below Spanish 200 do not count for the minor.

18 crs.

### Required (12 crs.)

- SPN 202 - Intermediate Conversation Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3

### Electives (6 crs.)

Two additional Spanish courses at the 300 or 400 level.

At least one at the 400 level.

## Music/Theatre Arts Department



Since music pervades society, the Music and Theatre Arts Department seeks to increase students' awareness of the musical and theatrical world and influence their cultural lives through critical listening and active participation. The department offers a full range of courses for music and theatre students alike, as well as performing ensembles for every interest.

Ensembles include Concert Choir, Madrigal Singers, Concert Band, Jazz Ensemble, Red Raider Marching Band, Brass and Woodwind Chamber ensembles, University-Community Orchestra, and Women's Chorale. Each year, more than 400 students perform for local audiences, throughout the United States and abroad. Students representing virtually all degree programs take time out of their busy schedules to participate in Shippensburg's music ensembles for the sheer enjoyment of making music. SU students may earn academic credit for participation in our performing ensembles.

## Minor

### Music Minor

The Music Minor Program is an 18-credit program that enables students to develop and cultivate their musical knowledge. The courses offered encourage each student to study within their interest yet allow them the opportunity to expand their musical knowledge.

18 crs.

#### Prerequisite

Introduction to Music (MUS 121) must be taken as a pre-requisite prior to or within the first two semesters of declaring a Music Minor and does not count toward the required 18 credits. MUS 121 also fulfills the university General Education, Category B requirement. Students then proceed through the nine required and nine elective credits to complete the minor.

- MUS 121 - Introduction to Music Credits: 3

#### Required Courses (9 crs.)

Required courses should be taken in the order as listed.

- MUS 140 - Class Piano, Level I Credits: 3
- MUS 212 - Music Theory I Credits: 3
- MUS 320 - Masterpieces of Music Credits: 3

#### Elective Courses (9 crs.)

Courses may be chosen from the remaining curricular choices or in consultation with the Department Chair.

Students must take one 300/400 level course as an elective.

Please choose from the following list:

#### Theory

- MUS 312 - Music Theory II Credits: 3

- MUS 110 - Fundamental Music Skills Credits: 3

## History

- MUS 129 - American Popular Music Credits: 3
- MUS 227 - Opera and Music Theatre Credits: 3
- MUS 261 - World Music Credits: 3
- MUS 315 - Music in the United States Credits: 3

## Performance Courses

- MUS 150 - Basic Guitar Credits: 3
- MUS 260 - Voice Class, Level I Credits: 3
- MUS 270 - Brass Instrument Class Credits: 3
- MUS 272 - Strings Class Credits: 3
- MUS 340 - Class Piano, Level II Credits: 3
- MUS 380 - Basic Conducting Credits: 3
- MUS 393 - Selected Topics in Music Credits: 1-3
- MUS 490 - Selected Topics in Music Credits: 1-3

## Performance

PERFORMING ENSEMBLES: each ensemble is 1 credit, per semester taken. Students may take/retake ensembles as many times as they choose. However, only a maximum of 3 credits will count as an elective towards the Music Minor and graduation.

- MUS 101 - Brass Ensemble Credits: 1
- MUS 103 - Marching Band Credits: 1
- MUS 104 - Concert Band Credits: 1
- MUS 105 - Concert Choir Credits: 1
- MUS 107 - Women's Chorale Credits: 1
- MUS 109 - String Ensemble Credits: 1
- MUS 113 - Jazz Ensemble Credits: 1
- MUS 117 - Madrigal Singers Credits: 1
- MUS 132 - University-Community Orchestra Credits: 1
- MUS 158 - Woodwind Ensemble Credits: 1

### Note:

Please contact the Music Department Office for audition/membership information: 717-477-1638

## Theatre Minor

The Minor in Theatre enables students to gain a general knowledge of performance and production. Courses provide a grounding in various types and periods of drama, performance skills (acting, scene study), and technical skills (basic drawing, directing, color, and 2D design). The Minor in Theatre is an 18 credit minor. Students proceed through the 15 required and 3 elective credits to complete the minor.

The training available within a theatre curriculum enriches careers in Early Childhood/Elementary Education, Elementary/Middle Level Education, Communication, and English. Students interested in Business, Marketing, or Management may consider the Theatre Minor as an entree to the field of Arts Management

**18 crs.**

## Prerequisite

THE 121 - Introduction to the Theatre Credits: 3 Introduction to Theatre must be taken as a pre-requisite prior to or within the first two semesters of declaring a Theatre Minor and does not count toward the required 18 credits. THE 121 also fulfills the university General Education, Category B requirement.

- THE 121 - Introduction to the Theatre Credits: 3

## Required Courses (15 crs.)

One Theatre course must be taken from each of the four category areas. One additional course in the History, Theory and Literature category is also part of the requirement.

## Elective Courses (3 crs.)

Elective courses in the Theatre Minor enable you to customize the curriculum according to your individual interest. The remaining 3 credits should be chosen from the curricular choices in Theatre and other departments. Any department outside of Music and Theatre, should be contacted regarding prerequisites and seats available.

## Theatre Praxis

- THE 323 - Children's Theatre Credits: 3
- THE 324 - Theatre Practicum Credits: 3
- THE 395 - Theatre Internship Credits: 3
- THE 396 - Theater Internship II Credits: 3

## History, Theory, And Literature

- THE 329 - Theatre History Credits: 3
- ENG 330 - Shakespeare Credits: 3
- MUS 227 - Opera and Music Theatre Credits: 3

## Design Management And Technical Theatre

- THE 229 - Introduction to Technical Production Credits: 3
- THE 327 - Costumes and Make-Up Credits: 3
- THE 395 - Theatre Internship Credits: 3
- THE 396 - Theater Internship II Credits: 3
- THE 490 - Selected Topics in Theatre Credits: 3
- ART 110 - Basic Drawing Credits: 3

- ART 215 - Color and Two-Dimensional Design Credits: 3
- ART 218 - Three-Dimensional Design Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MKT 325 - Advertising and Promotional Strategy Credits: 3
- MKT 370 - Services Marketing Credits: 3

## Performance

- THE 122 - Acting I: Fundamentals of Acting Credits: 3
- THE 222 - Acting II: Scene Study and Analysis Credits: 3
- THE 322 - Voice and Movement for the Stage Credits: 3
- THE 490 - Selected Topics in Theatre Credits: 3
- MUS 260 - Voice Class, Level I Credits: 3

## Physics Department

Graduates with a B.S. in Physics often go on to graduate schools in physics or engineering. A significant percentage of them, however, use physics as a springboard to careers in other fields like medicine, law, or finance. Indeed, studies show that physics graduates are top scorers in exams like the MCAT or the LSAT and are appreciated everywhere for their problem solving abilities. Many students also choose to pursue both engineering and physics undergraduate degrees by taking advantage of the Physics Department's articulation agreements with several engineering schools in Pennsylvania and Maryland.

The Physics Department offers undergraduate studies leading to three different degrees: a Bachelor of Science in Physics, a Bachelor of Science in Applied Physics and a Bachelor of Science in Education. In addition, the Physics B.S. offers concentrations in Advanced Physics and Computational Physics, as well as a certificate in nanotechnology. A Physics Minor is also available.

## Bachelor of Science

### Physics, B.S.

The Physics B.S. offers the following concentrations:

1. *Advanced Physics*: Designed for students planning to go on to graduate school in physics. The concentration provides a solid and rigorous grounding in physics and will prepare the students well for the advanced physics GRE test, as well as graduate school studies.
2. *Computational*: Offers a solid grounding in physics through the physics core, and develops computational skills applicable to all scientific fields. These skills are developed through a computational physics course and courses in computer science. Students following this concentration can also complete a minor in computer science by taking one extra computer science course after fulfilling the concentration requirements. This concentration prepares students well for the job market by offering applicable skills as well as experience through its project or internship requirement.

120 crs.

General Education requirements (36 crs.)

## Physics Core (55 crs.)

## Additional courses (29 crs.)

Physics electives\*\*9 cr (at least 3 courses at or above 300 level)

## General electives

20 hours of general electives including at least 12 hours at the 300 level or higher. A minor in another discipline is strongly encouraged. See note at the end of the Core Curriculum description.

## Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## **Applied Physics, B.S.**

The Applied Physics program is pursued by roughly half of the physics majors. It results in a dual Physics-Engineering degree, and it is controlled by 3+2 agreements between the Shippensburg Physics Department and several engineering schools. According to these agreements, students spend three years at Shippensburg University's Physics Department, completing 98 credits, and then proceed to complete their studies in two years at one of the participating engineering programs (most notably Penn State University or here at Shippensburg). After successfully completing the program students earn both an Applied Physics B.S. from Shippensburg and a B.S. in engineering from the school they transferred to (or a double major at Shippensburg). The Shippensburg physics credits consist of the Physics Core, required courses in allied fields (chemistry, computer science and mathematics) as well as general education courses.

The 3+2 program, fairly common in physics departments across the nation offer several advantages:

- By virtue of the agreement a student in a 3+2 program is guaranteed admission with junior standing into the engineering school chosen, provided that this student maintains, while at Shippensburg, a specified QPA which varies with engineering schools and disciplines. We notice, however, that engineering schools can occasionally put restrictions on the availability of seats, due to enrollment restrictions in some of their engineering disciplines.
- Due to their solid scientific background, students typically do very well after transferring to their engineering discipline.
- Students profit for three years of the small class size and careful faculty guidance that Shippensburg is known for.

### **Degree Requirements (98 crs.):**

Students in the Applied Physics program must complete their Shippensburg requirements in three years. These consist of the following courses:

#### **General Education requirements (36 crs.)**

#### **The Physics Core (55 crs.)**

#### **Additional courses (7 crs.)**

- MAT 318 - Elementary Linear Algebra Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

#### **Note:**

See note at the end of the Core Courses description

### **Physics Core Courses**

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

### Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## **Physics, Advanced Physics Concentration, B.S.**

General Education requirements (36 crs. see note\* at the end of the Core Curriculum description)

### Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

### Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

### Additional courses (29 crs.)

#### Chemistry (4 crs.)

- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

#### Physics (25 crs.)

- PHY 411 - Quantum II Credits: 3
- PHY 421 - Electricity and Magnetism II Credits: 3
- PHY 431 - Mechanics II Credits: 3
- PHY 397 - Intro to Research Credits: 3
- PHY 398 - Research II Credits: 3
- PHY 3XX/4xx: Four 300- or 400-level Electives

## **Physics, Computational Physics Concentration, B.S.**



General Education requirements (36 crs. see note\* at the end of the Core Curriculum description above)

## Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

### Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

### Additional courses (29 crs.)

#### Math (6 crs.)

- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 410 - Numerical Analysis Credits: 3

## Computer Science (12 crs.)

- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4 or
- CSC 371 - Database Management Systems Credits: 4
- CMPE 322 - Microcontrollers & Interfaces Credits: 4

## Physics

Two physics courses at 300 or 400 level (7 cr)

- PHY 471 - Computational Physics Credits: 4
- PHY 3XX or 4XX: 300- or 400-level Physics Elective
- PHY 3XX or 4XX: 300- or 400-level Physics Elective

## Bachelor of Science in Education

### Physics, B.S.Ed.

The Physics B.S.Ed. program leads to a teaching certification in Physics at the secondary education level.

## Degree Requirements. (131 crs.)

### General Education requirements (33 crs.)

Note: Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 )

### Physics Core (55 crs.)

All degrees require the successful completion of the Physics Core

### Additional courses (43 crs.)

### Physics (3 crs.)

- PHY 4XX - 400 level Physics elective

### Biology (4 crs.)

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

## Earth-Space Sciences (3 crs.)

- ESS 110 - Introduction to Geology Credits: 3 or
- ESS 210 - Physical Geology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Note:

See note at the end of the Core Curriculum description. BIO 162 also meets a General Education Category C requirement.

## Certificate

### Nanotechnology Certificate

The nanotechnology certificate offers students the technical expertise and theoretical understanding to manipulate matter at the nanometer length scale. Nanofabrication has applications in many fields including physics, biology, material science and engineering. This certificate is very popular with students in part because of the employment opportunities offered to its graduates.

The certificate requires the completion of one semester at the Penn State Center for Nanotechnology Education and Utilization; since this requirement is satisfied during the summer, enrolling in the concentration should not delay graduation.

### Requirements (30 crs.)

#### Required Courses

- Engineering: Penn State-NSF NMT summer courses (18 crs.)
- PHY 311 - Quantum I Credits: 4
- PHY 325 - Semiconductor Devices Credits: 4
- PHY 450 - Quantum Materials Credits: 4

## Minor

## **Physics Minor**

26 crs.

### **Required Courses**

- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4

### **Note:**

If the student declaring the minor has already taken either the PHY 121,PHY 122 sequence or the PHY 205,PHY 206 with their associated labs, the PHY 221,PHY 222 requirement is waived for the minor.

## **Political Science Department**

The Department of Political Science offers undergraduate programs leading to the degrees of Bachelor of Arts in Political Science, Bachelor of Science in Public Administration, a minor in Political Science and a minor in Public Administration. Students in both majors will learn to describe, analyze, draw conclusions, and present their findings both orally and in writing.

### **Political Science Features**

Political science students choose between two tracks: general and international. In each track, students take a core group of courses and elect courses in applied competency subfields. The core and subfields are designed to develop student skills in written and oral communication as well as problem solving. Majors also complete two courses that emphasize experiential learning. All students are required to complete a capstone project in PLS 399 Senior Seminar.

### **Public Administration Features**

The Public Administration major provides students with professional skills for careers in government and other public sector organizations. This major is designed to provide students with a strong foundation in public management practices and behaviors; it also exposes students to areas of specialization within the field of public administration. Public Administration students take core courses in government, policy analysis, budgeting, financial administration, and personnel administration and then select a group of electives to complete the program.

### **Internship Policy**

Students in both majors have the opportunity to complete an internship with governmental agencies, non-profit organizations, and law firms to complement and supplement their course work. A student can count a maximum of six internship credits toward completion of the electives within the political science or public administration majors.

## **Career Opportunities**

Political science and public administration are appropriate majors for students who plan a career in government, business, or journalism. Majors are also prepared to pursue graduate study in political science, international relations, public administration, or law.

## **Pre-Law Program**

Students who plan to apply to law schools may select their major from a wide range of fields depending upon their interests. The scope of law is broad and offers room for individuals of varied educational and intellectual backgrounds. The Department of Political Science offers numerous courses for majors and non-majors that will help prepare students for law school. Students interested in legal careers are encouraged to seek advice from the department's pre-law advisor. LSAT registration forms and law school materials are available from the Political Science Department office.

## **Bachelor of Arts**

### **Political Science, B.A**

#### **Political Science (39 crs.)**

##### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

#### **General Track Required (21 crs.)**

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 399 - Senior Seminar Credits: 3

##### **Note:**

Students must earn a C or better in each required core course.

In addition to the required core, students need to take courses in four applied competency areas. To meet this requirement students need between 9 and 15 credits; the number of credits depends on whether a course counts for more than one applied competency.

## **Applied Competencies**

### Applied Competency: Oral Communication (3 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

### Applied Competency: Written Communication (3 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 312 - The American Presidency Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3

### Applied Competency: Problem Solving (3 crs.)

- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

## Applied Competency: Experiential Learning (6 crs.)

- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 313 - The Judicial Process Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 395 - Internship I Credits: 3
- Any Study Abroad course in any discipline.

## Departmental Electives (3-9 crs.)

Any Political Science course(s).

A student can count a maximum of six internship credits toward the major. Additional internship credit hours can be used as credits applied toward graduation.

## General Education

Students are strongly encouraged to take the following General Education courses:

- MAT 117 - Applied Statistics Credits: 3 (Category A or Required Skills)
- ECO 101 - Principles of Macroeconomics Credits: 3 (Category D) or
- ECO 102 - Principles of Microeconomics Credits: 3 (Category D) or
- ECO 113 - Principles of Economics Credits: 4 (Category D)
- GEO 101 - World Geography Credits: 3 (Category D) or
- GEO 103 - Geography of the United States and Canada Credits: 3 (Category D)
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 (Category E)

## **Political Science, International Concentration, B.A.**

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Political Science - International Track (39 crs.)

## International Track Required (24 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 399 - Senior Seminar Credits: 3

### Note:

Students must earn a C or better in each required core course.

In addition to the required core, students need to take courses in four applied competency areas. To meet this requirement students need between 9 and 15 credits; the number of credits depends on whether a course counts for more than one applied competency.

## Applied Competencies

### Applied Competency: Oral Communication (3 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

### Applied Competency: Written Communication (3 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 312 - The American Presidency Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3



- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3

### Applied Competency: Problem Solving (3 crs.)

- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

### Applied Competency: Experiential Learning (6 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 313 - The Judicial Process Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 395 - Internship I Credits: 3
- Any Study Abroad course in any discipline.

### International Track Electives (12 crs.)

(Note: These courses are also used to satisfy the Applied Competencies.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3

- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 394 - Selected Topics in International Politics Credits: 3

## Departmental Electives (0-3 crs.)

Any Political Science course.

A student can count a maximum of six internship credits toward the major. Additional internship credit hours can be used as credits applied toward graduation.

## General Education

Students are strongly encouraged to take the following General Education courses:

- MAT 117 - Applied Statistics Credits: 3 (Category A or Core)
- ECO 101 - Principles of Macroeconomics Credits: 3 (Category D) or
- ECO 102 - Principles of Microeconomics Credits: 3 (Category D) or
- ECO 113 - Principles of Economics Credits: 4 (Category D)
- GEO 101 - World Geography Credits: 3 (Category D)
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 (Category E)

## Bachelor of Science

### Public Administration, B.S.

(45 crs)

Required (30 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 231 - State and Local Government Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

## Note:

Students must earn a C or better in each required core course.

## Public Administration Electives (6 crs.)

- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3
- PLS 389 - Selected Topics in Public Administration Credits: 3
- PLS 395 - Internship I Credits: 3
- PLS 396 - Internship II Credits: 3
- PLS 397 - Internship III Credits: 3-6
- PLS 431 - Pennsylvania Local Government Credits: 3

## Note:

Internship - The department strongly encourages students to complete an internship. To qualify for an internship, a student must have a 2.0 overall QPA and a 2.3 QPA in the public administration major. Students must have completed the following courses to be eligible for an internship: PLS 100, PLS 201, PLS 231, PLS 271, PLS 300, and PLS 301. A student can count a maximum of six internship credits toward the major.

## Electives (3) - Any Political Science course

## Allied Fields (6 crs.) 16 crs. total ---Includes 6 crs. beyond General Education Requirements

Student majoring in public administration must also take the following courses in the allied fields. Three of these courses satisfy General Education requirements.

## Economics (6 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3 or
- ECO 113 - Principles of Economics Credits: 4
- ECO - Any Economics course at or above 200 level

## Sociology (6 crs.)

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

And an additional sociology course from the following:

- SOC 243 - Minority Groups Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3
- SOC 363 - Population Problems Credits: 3
- SOC 365 - Elites in Society Credits: 3

Mathematics (4 crs.)

- MAT 117 - Applied Statistics Credits: 3

**Minor**

**Political Science Minor**

18 crs.

Required (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3

Electives (9 crs.)

Students must select courses from the following list. Students must take two courses at the 300-level or above. Students may take either PLS 291 Contemporary Issues or PLS 391 Selected Topics in Political Science as one elective.

- PLS 231 - State and Local Government Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 291 - Contemporary Issues Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 325 - African American Politics Credits: 3

- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- PLS 391 - Selected Topics in Political Science Credits: 1-3
- PLS 431 - Pennsylvania Local Government Credits: 3
- PLS 490 - Selected Topics in Political Science Credits: 3
- PLS 491 - Selected Topics in Political Science Credits: 3

## **Public Administration Minor**

18 crs.

Required (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3

Public Administration Electives (6 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 373 - Public Financial Administration Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

Elective (3 crs.)

Students must select one public administration/political science course to fulfill this requirement.

## **Professional Studies Program**

The B.S. in Professional Studies with a concentration in Technical Leadership and Administration is a degree completion program designed for working adults who have earned 60 or more college credits. Most courses are offered on the Shippensburg campus although some of the core courses may be available at other locations, such as HACC-Gettysburg, in the evenings; and some courses may be online.

The program's core courses will provide the opportunity to explore how a liberal arts education can enhance career opportunities. These courses will help students understand the structure of organizations, the behavior of individuals within organizations, and how to resolve conflict in order for organizations to function efficiently. The professional courses will allow students to explore communications and management concepts and issues critical to the effective administration of work units and organizations. The electives give students the opportunity to enhance their educational experience, and the internship or research project at the end of the program promotes the integration of theory and practice.

Regularly admitted students with an interest in this major must meet the degree completion admission requirements, which include an Associates' Degree and five years of work experience.

## **Degree Requirements**

- Completion of the 46-credit Professional Studies, Technical Leadership and Administration program with a minimum of a 2.0 cumulative QPA;
- Fulfillment of 48 credits of general education requirements;
- Attainment of a minimum of 120 college/university credits.

## **Psychology Department**

The Department of Psychology offers an undergraduate program leading to the Bachelor of Arts degree. The psychology program has been designed to comply with the recommendations provided by the American Psychological Association, providing a broad base of knowledge with a focus on the scientific aspect of psychological science. This program will provide you with knowledge of psychology's basic terminology, research and statistical methods, major theories, and classic and current research and in-depth knowledge in areas of specialization; the general problem-solving skills common to all the liberal arts, plus the special research techniques of psychology, from experimental design to interviewing; and provide you with insight into your own psychological development, values, potentials, and career, through reflection and interaction with scholarly material, professors, and fellow students.

## **Psychology Features**

All professors in the Department of Psychology have doctoral degrees and are trained researchers. We are a diverse department and our areas of expertise range from consulting work to research on human memory, the influence of groups, animal learning, behavioral neuroscience, mental disorders, child development, and social justice.

A variety of options encourage you to move beyond the classroom:

- You can do your own research project. To help you, we have laboratory facilities in Franklin Science Center that will allow you to experiment with rats, videotape interviews, use computers, and so on.
- You can do an internship by finding a position as a therapeutic support staff (TSS), assist children and adolescents in a school setting, attendant at a halfway house, personnel manager's assistant, or any psychology-related job and by writing a paper on the experience.
- You can attend talks by guest speakers, and take trips to conferences, institutions, and research facilities.
- You can join a Living Learning Community made up of psychology majors to form a network of friends with similar goals and have access to additional support in order to enhance your success and growth in the program.
- You can choose to participate in service learning projects working with children, and elderly in the community.

- If you qualify with an overall QPA of 3.0 or above and a 3.2 or above in psychology, you are invited to apply to Psi Chi, a national honor society. You must have completed three psychology courses at Shippensburg University and three semesters at Shippensburg University.

## Honors in Psychology Program (48 crs.)

The Honors in Psychology Program is open to psychology majors who have and maintain a 3.6 overall QPA and 3.8 Psychology QPA. Students in their second semester (freshmen class) and beyond (up to and including first semester juniors) who meet this requirement will be invited to participate. If you are a transfer student who would like to participate or if you believe you are qualified and were not asked, please contact the department.

Honors students must earn their 15 Knowledge Base credits from some combination of 300-level courses, 400-level courses, and/or honors credit in 200-level courses. Students must earn nine credits from the following: PSY 379 - Capstone Seminar in Psychology Credits: 3, PSY 381 - Honor Thesis I Credits: 3, and PSY 382 - Honor Thesis II Credits: 3. Honors students must also earn 6 hours of honors credit from some combination of 300-level and 400-level courses (beyond those used to satisfy core or elective requirements for the major). With departmental permission, 500-level graduate courses can be taken to fulfill the requirements for these 6 credits. Upon graduation, the successful completion of this Honors program provides with additional designation as Honors in Psychology.

## Psychology Career Opportunities

A bachelor's degree in psychology is a popular liberal arts degree for people seeking basic managerial positions in industry and government.

While the bachelor's degree will open up some mental health care positions, most students who wish to work specifically in psychology go on to master's programs in areas such as counseling, experimental, and industrial/organizational psychology. Some students pursue doctorates in areas such as clinical, developmental, and social psychology. More than 30 percent of our graduates go on to earn an advanced degree.

A bachelor's in psychology can lead to careers in:

- Clinical psychology
- Cognitive psychology
- Conditioning-learning
- Counseling psychology
- Developmental psychology
- Health psychology
- Industrial/organizational psychology
- Legal psychology
- Behavioral neuroscience
- Physiological psychology
- School psychology
- Social psychology
- Quantitative psychology

Students wishing to change majors to psychology must have a 2.30 quality point average and must apply the first 3 weeks of each semester.

## Bachelor of Arts

# Psychology, B.A.

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Core Courses (27 crs.)

### Developmental

Choose 1 from the following:

- PSY 265 - Childhood and Adolescence Credits: 3
- PSY 352 - Adulthood and Aging Credits: 3

### Social/Personality

Choose from 1 of the following:

- PSY 240 - Psychology of Personality Credits: 3
- PSY 270 - Social Psychology Credits: 3

### Abnormal

Choose 1 of the following:

- PSY 330 - Abnormal Psychology Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3

### Neuroscience

Choose 1 of the following:

- PSY 320 - Behavioral Neuroscience Credits: 3
- PSY 323 - Sensation and Perception Credits: 3

### Learning/Behavioral

Choose 1 of the following:

- PSY 235 - Conditioning and Learning Credits: 3
- PSY 383 - Children's Understanding of Their Social World Credits: 3

### Cognition/S&P



Choose 1 of the following:

- PSY 323 - Sensation and Perception Credits: 3
- PSY 325 - Psychology of Human Cognition Credits: 3

## Methods

Complete all 3 of the following:

- PSY 105 - Research Design and Statistics for the Behavioral Sciences I Credits: 3
- PSY 205 - Research Design and Statistics for the Behavioral Sciences II Credits: 3
- PSY 301 - Experimental Psychology Credits: 3

## Electives (12 crs.)

Select at least 2 from each category:

### Ethical & Social Responsibility in a Diverse World

- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3
- PSY 350 - Psychology of Sustainability Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- PSY 470 - Legal Psychology Credits: 3

### Professional Development

- PSY 311 - Applied Behavior Analysis Credits: 3
- PSY 335 - Psychology of Social Influence Credits: 3
- PSY 340 - Introduction to Clinical Psychology Credits: 3
- PSY 361 - Psychology of Group Interaction Credits: 3
- PSY 384 - Psychology of Person-to-Person Interaction Credits: 3
- PSY 432 - The Psychology of Computers and the Internet Credits: 3
- PSY 435 - Psychopharmacology Credits: 3
- PSY 445 - Psychology of Thinking Credits: 3
- PSY 450 - Crisis Intervention Credits: 3
- PSY 475 - Industrial and Organizational Psychology Credits: 3
- PSY 485 - Tests and Measurements Credits: 3

## Capstone (3 crs.)

Choose 1 of the following:

- PSY 374 - Advanced Research in Psychology I Credits: 3
- PSY 375 - Advanced Research in Psychology II Credits: 3

- PSY 379 - Capstone Seminar in Psychology Credits: 3
- PSY 385 - Internship in Psychology Credits: 1-4
- PSY 386 - Internship in Psychology Credits: 3
- PSY 389 - Internship in Psychology III Credits: 3
- PSY 440 - History and Systems of Psychology Credits: 3

## **Minor**

### **Psychology Minor**

18 crs.

#### **Introductory Course (3 credits)**

- PSY 101 - General Psychology Credits: 3

#### **A. Goal: Core Classes (9 credits)**

All courses require a grade of C or better.

- PSY 235 - Conditioning and Learning Credits: 3
- PSY 240 - Psychology of Personality Credits: 3
- PSY 265 - Childhood and Adolescence Credits: 3
- PSY 270 - Social Psychology Credits: 3
- PSY 320 - Behavioral Neuroscience Credits: 3
- PSY 323 - Sensation and Perception Credits: 3
- PSY 325 - Psychology of Human Cognition Credits: 3
- PSY 330 - Abnormal Psychology Credits: 3
- PSY 352 - Adulthood and Aging Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3
- PSY 383 - Children's Understanding of Their Social World Credits: 3

#### **B. Goal: Professional Development (3-6 credits)**

- PSY 311 - Applied Behavior Analysis Credits: 3
- PSY 335 - Psychology of Social Influence Credits: 3
- PSY 361 - Psychology of Group Interaction Credits: 3
- PSY 432 - The Psychology of Computers and the Internet Credits: 3
- PSY 435 - Psychopharmacology Credits: 3
- PSY 475 - Industrial and Organizational Psychology Credits: 3
- PSY 485 - Tests and Measurements Credits: 3

#### **C. Goal: Ethical and Social Responsibility in a Diverse World (3-6 credits)**

- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3

- PSY 350 - Psychology of Sustainability Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- PSY 470 - Legal Psychology Credits: 3

## Note:

Students must have a total of 9 credits in Goals B & C, with at least one course in each of the areas.

## Sociology/Anthropology Department

Sociology is the scientific study of human society and social life. The discipline studies the social causes and consequences of human behavior. In more practical language, sociology concerns itself with the institutional patterns of social life and social problems. By being aware of the social environment in which humans interact with each other, the study of sociology will develop an awareness of how social forces influence behavior and how humans, through their collective action, respond to social problems, and social change.

The Bachelor of Arts degree in sociology is a good choice if you are interested in working with people in counseling, social or public service, personnel, managerial or administrative positions. Careers in sociology, law, counseling, and ministry are possible with graduate training. Many of our students participate in our intern program where you may choose from existing positions or create one specific to your interests.

## Sociology and Anthropology Features

Majors have the opportunity to fashion their individual programs around special interests which build on a core curriculum. For example, concentrations in gerontology, culture and social change, human relations, family and marriage, social problems, and social institutions and organizations are possible.

Minors are offered in anthropology and sociology. For details about the requirements of these programs, contact the sociology and anthropology department.

Anthropology students will emphasize the holistic study of humankind from a cross-cultural perspective. An appreciation of human diversity leads to a greater awareness of the common concerns and interests of people in many different societies. Courses in anthropology provide an exposure to the major areas of cultural anthropology, human paleontology and archaeology.

## Sociology and Anthropology Career Opportunities

Because sociology is the scientific study of social relationships, it is ideal preparation for many professions and careers: law, business, government and all its related fields, personnel work, family and marriage counseling, any career in which human interaction is important.

The anthropology minor combines well with almost any major. Students have found it to be valuable in preparation for careers in international business, counseling, government, and research. Cross-cultural interaction is increasingly common, both within our diverse American population and with people abroad. Anthropology is a field designed to make such human interaction easier and more successful.

# **Bachelor of Arts**

## **Sociology, B.A.**

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**(36 crs.)**

### **Required (21 crs.)**

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3
- SOC 201 - Sociological Practice Credits: 3
- SOC 220 - Social Stratification Credits: 3
- SOC 380 - Classical Social Theory Credits: 3
- SOC 385 - Introduction to Social Research Credits: 3
- SOC 386 - Data Collection and Analysis Credits: 3
- SOC 415 - Senior Seminar Credits: 3

### **Note:**

Students must earn a C or better in each required core course. Students who receive a D or F in these classes may repeat them in accordance with university policy.

### **Sociology Electives - 15 crs.**

This may include an internship in sociology, which is highly recommended.

### **Allied Fields**

Arts and sciences students majoring in sociology must take the following courses in allied fields. All of these may be taken as general education.

- ANT 111 - Cultural Anthropology Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- ECO - Economics elective
- Sequence in Political Science
- GEO - Geography elective
- PHL - Philosophy elective
- PSY 101 - General Psychology Credits: 3

### **Free Electives**

Free electives are to be taken in appropriate fields with advisement. They may be utilized to pursue various special interest areas in sociology (see below) or to develop the equivalent of a minor or a second concentration. Language or research tools may be alternative recommendations.

Internships in sociology are highly recommended and may be taken for a total of 9 credits of which 6 credits can be applied to the major.

Sociology courses may be grouped into special interest areas to give students more depth in a particular subfield of sociology. Courses taken as part of the general education and allied fields requirements may also reinforce particular interest groupings within sociology. Possible special interest areas and examples of supporting courses follow:

## Cross Cultural Anthropology

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 211 - Comparative Cultures Credits: 3
- ANT 312 - Comparative Marriage and Family Credits: 3
- ANT 351 - Peoples and Cultures of Europe Credits: 3

## Archaeology

- ANT 150 - Introduction to Archaeology Credits: 3
- ANT 330 - Mammoth Hunters and Moundbuilders Credits: 3
- ANT 360 - Aztec and Maya Archaeology Credits: 1-3

## Culture and Social Change

- SOC 370 - Sociology of the Arts Credits: 3
- SOC 375 - Sociology of Media & Culture Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3

## Family and Marriage

- SOC 363 - Population Problems Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 410 - Family and Society Credits: 3

## Social Problems

- SOC 244 - Criminology Credits: 3
- SOC 245 - Juvenile Delinquency Credits: 3
- SOC 363 - Population Problems Credits: 3

## Gerontology

- SOC 371 - Social Dynamics of Aging Credits: 3

- SOC 320 - Sociology of Disability Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 369 - Medical Sociology Credits: 3

## Human Relations

- SOC 243 - Minority Groups Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3

## Social Institutions/Organizations

- SOC 220 - Social Stratification Credits: 3
- SOC 365 - Elites in Society Credits: 3
- SOC 410 - Family and Society Credits: 3
- SOC 435 - Gender, Organizations, and Leadership Credits: 3

## Note:

Students should refer to the sociology Course Descriptions in the catalog for other courses which may apply to their special interest areas.

## Minor

### Anthropology Minor

18 crs.

The anthropology minor consists of 18 credits, nine of which are required, and nine of which are electives. A minimum of 6 credits must be from 300-level or above courses. Three credits of internship may count toward fulfillment of the requirements of the minor.

### Core Courses (9 crs.)

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
- ANT 105 - Great Discoveries in Archaeology Credits: 3  
OR
- ANT 150 - Introduction to Archaeology Credits: 3

### Elective Courses (9 crs.)

- Any three ANT courses for a total of 9 credits; two of the three courses need to be at the 300 level or higher.

## **Sociology Minor**

18 crs.

### **Required (6 crs.)**

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3
- SOC 380 - Classical Social Theory Credits: 3

### **Sociology Electives (12 crs.)**

SOC courses selected by advisement.

At least 3 credits must be at 300 level or higher.

## **Technical/Professional Communications Program**

Students completing the Technical/Professional Communications Minor will possess a well-rounded education that will help them become lifelong learners, adaptable to and conversant with changing workplace dynamics.

The minor's flexible interdisciplinary design provides students with a combination of the intellectual capabilities and highly marketable professional skills they need to embark on a successful career. Courses offered include two core courses, in technical writing and computer systems, and a variety of additional courses ranging from computer design to advertising copy writing, from advanced technical writing to web design.

Students completing the Technical/Professional Communications Minor will possess up-to-date knowledge and skills that, combined with their major, can lead to careers as a business analyst, editor, market researcher, technical reporter, web developer, media specialist, ad writer/designer, and publications manager. In addition, these skills are often sought as a technical component in many professional positions that are not primarily technical: grant writer, researcher, and marketing manager, among many others.

### **Minor**

## **Technical/Professional Communications Minor**

Students completing the Technical/Professional Communications Minor will possess a well-rounded education that will help them become lifelong learners, adaptable to and conversant with changing workplace dynamics.

The minor's flexible interdisciplinary design provides students with a combination of the intellectual capabilities and highly marketable professional skills they need to embark on a successful career. Courses offered include two core courses, in technical writing and computer systems, and a variety of additional courses ranging from computer design to advertising copy writing, from advanced technical writing to web design.

Students completing the Technical/Professional Communications Minor will possess up-to-date knowledge and skills that, combined with their major, can lead to careers as a business analyst, editor, market researcher, technical reporter, web developer, media specialist, ad writer/designer, and publications manager. In addition, these skills are often sought as a technical component in many professional positions that are not primarily technical: grant writer, researcher, and marketing manager, among many others.

18 crs.

## Required (6 crs.)

Students must complete 6 credit hours by taking two of the following core courses, one in writing and one in computer systems:

- ENG 238 - Technical/Professional Writing I Credits: 3
- CSC 103 - Overview of Computer Science Credits: 3  
OR
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 107 - Computer Science I - Lab Credits: 1  
OR
- MIS 142 - Business Computer Systems Credits: 3

### Note:

CSC 110 and CSC 107 for Computer Science Majors Only

## Electives (12 crs.)

The remaining 12 credits may be completed by taking any of the following courses (no more than two courses per department can count for minor credit):

- ART 217 - Computer Design I Credits: 3
- ART 306 - Computer Design II Credits: 3
- ART 319 - Computer Design III Credits: 3
- ART 425 - Computer Design IV Credits: 3
- ART 430 - Computer Design V Credits: 3
- ART 435 - Computer Design VI Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 224 - Electronic Media Writing Credits: 3
- COM 285 - News Writing and Reporting Credits: 3
- COM 290 - Advertising Copywriting Credits: 3
- COM 425 - Feature Writing Credits: 3
- CSC 434 - Web Programming Credits: 4
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3
- HCS 350 - Theories of Organizational Communication Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- PHL 240 - Ethical Issues and the Media Credits: 3

### Note:

ART 217 is a pre-requisite to any other courses listed in that department.



CSC 434 for Computer Science majors only

## **Women's and Gender Studies Program**

Women's and Gender Studies offers an interdisciplinary program that examines the diverse experiences of women in the U.S. and globally, both past and present. Many courses in the program also critically examine the meanings of gender as a culturally constructed category of identity. The core courses and wide range of electives explore the intersections of gender, race, class, ethnicity, and sexuality, as well as the social and cultural institutions that shape women's and men's lives. Courses in WST investigate previously neglected materials, and apply new methodological, critical, and theoretical approaches in order to analyze and explain the role and status of women in society, and the impact of gendered practices within societies and cultures.

Our undergraduate WST minor is designed to provide you with basic groundwork in the field of Women's and Gender Studies; you will gain a combination of skills that can be used in diverse fields and across disciplines. You will gain an increased understanding of human diversity, especially gender diversity, that will help prepare you for our continuously changing global society. Through required coursework, research, electives in your own area of interest, internships, extracurricular activities, and leadership and service opportunities, you will gain knowledge and experience that will complement and enhance your major field of study.

Students with multicultural Women's and Gender Studies experience will have an advantage as potential employees, since employers will increasingly seek applicants with knowledge of both gender issues and cultural diversity. The Women's and Gender Studies minor will help prepare you to work with a wide variety of people and anticipate their changing needs. Graduates of the Women's and Gender Studies minor find opportunities in business administration and management, advertising, health fields, education, journalism, criminology, social work, counseling, psychology, politics, law, and international affairs.

### **Certificate**

#### **Women's and Gender Studies Certificate**

Students can earn a Certificate in Women's and Gender Studies by completing the two core courses (WST 100 and WST 300) and two of the approved electives, which must come from two different disciplines. One course may be double-counted toward the student's major and the WST Certificate. Verification of the WST Certificate will appear on the student's transcript. Three courses must be taken at Shippensburg University.

### **Minor**

#### **Women's and Gender Studies Minor**

Women's and Gender Studies offers an interdisciplinary program that examines the diverse experiences of women in the U.S. and globally, both past and present. Many courses in the program also critically examine the meanings of gender as a culturally constructed category of identity. The core courses and wide range of electives explore the intersections of gender, race, class, ethnicity, and sexuality, as well as the social and cultural institutions that shape women's and men's lives. Courses in WST investigate previously neglected materials, and apply new methodological, critical, and theoretical approaches in order to analyze and explain the role and status of women in society, and the impact of gendered practices within societies and cultures.

Our undergraduate WST minor is designed to provide you with basic groundwork in the field of Women's and Gender Studies; you will gain a combination of skills that can be used in diverse fields and across disciplines. You will gain an

increased understanding of human diversity, especially gender diversity, that will help prepare you for our continuously changing global society. Through required coursework, research, electives in your own area of interest, internships, extracurricular activities, and leadership and service opportunities, you will gain knowledge and experience that will complement and enhance your major field of study.

Students with multicultural Women's and Gender Studies experience will have an advantage as potential employees, since employers will increasingly seek applicants with knowledge of both gender issues and cultural diversity. The Women's and Gender Studies minor will help prepare you to work with a wide variety of people and anticipate their changing needs. Graduates of the Women's and Gender Studies minor find opportunities in business administration and management, advertising, health fields, education, journalism, criminology, social work, counseling, psychology, politics, law, and international affairs.

18 crs.

### Core Requirements (6 crs.)

- WST 100 - Introduction to Women's and Gender Studies Credits: 3
- WST 300 - Seminar in Women's and Gender Studies Credits: 3

### Approved Electives (12 crs.)

- ANT 312 - Comparative Marriage and Family Credits: 3
- ANT 320 - Comparative Gender Roles Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- COM 410 - Women and the Media Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- ECO 303 - Labor Economics: Theory and Policy Credits: 3
- ENG 345 - Women's Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 407 - Women in Comparative Perspective Credits: 3
- MAT 400 - History of Mathematics Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 435 - Gender, Organizations, and Leadership Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 359 - Social Work Elective: Violence in Interpersonal Relationships Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- WST 200 - Independent Study in Women's and Gender Studies Credits: 3

- WST 390 - Internship in Women's and Gender Studies Credits: 3-6

## Note:

To complete the Women's and Gender Studies minor, students will take the two core courses (WST 100 and WST 300) and four of the approved electives. These four electives must come from at least two different disciplines. Two courses may be double-counted toward the student's major and the WST minor. Two elective courses must be at the 300 or 400 level. Five courses must be taken at Shippensburg University.

Additional electives and special topics courses continue to be developed by affiliated Women's and Gender Studies faculty.

## Honors Department

## John L. Grove College of Business

The John L. Grove College of Business offers programs leading to the Bachelor of Science in Business Administration (B.S.B.A.), which are accredited by AACSB International. In order to maintain the high quality of our AACSB-accredited program, students will be required to participate in student outcomes assessment efforts that are designed to continuously improve the quality of our programs and services.

## Mission of the John L. Grove College of Business

The John L. Grove College of Business of Shippensburg University provides a high-quality and a high-value comprehensive educational experience that prepares students to excel as principled leaders in today's global business community.

## Business Internship Program

Juniors and seniors in the John L. Grove College of Business, who are in good academic standing and sophomores with at least a 3.00 cumulative quality point average or higher point average, are eligible to participate in the Business Internship Program. Interns do major-related work in business or the professions for free elective credit during the academic year or during the summer. Internships must be approved by the department chair and internship director. Attendance at an internship workshop is required before students may apply or register for a college-sponsored internship. Credit earned through the internship program may only be used as a free elective credit (a maximum of nine credit hours) and may not be used as a substitute for major course requirements.

Benefits of internship include applying academic knowledge and skills to on-the-job experiences, communicating and interacting with professionals in the world of work, developing professional self-confidence, clarifying career goals through exposure to a variety of career opportunities, earning money for university and personal expenses, building a network of professional contacts, completing free elective credits for graduation and returning to the university with renewed interest and a new perspective on learning.

## Transfer Requirements

All transfer students seeking admission into the B.S.B.A. degree program in the John L. Grove College of Business must meet the university's minimum transfer quality point average requirements. In addition, transfer students must

complete MAT 140A / MAT 140B - College Algebra Credits: 3 (or equivalent) and/or MAT 181 - Applied Calculus Credits: 3 (or equivalent) with a C grade or higher before being considered for admission into the B.S.B.A. degree programs.

Students are permitted to transfer any required 100- or 200-level business course from a community college or from an accredited four-year institution provided the course content is equivalent and a grade of C or better is earned. Courses in business at the 300- or 400-level will be considered for transfer credit only if they were earned at a four-year institution whose business programs are accredited by the AACSB International, if the transfer student passes a standard examination prepared by the department offering the course, or if a grade of C or higher is earned in a validating course approved by the department. This last validation method is limited to one course in any one discipline and a total of six credits. Arrangements for validating a course should be made through the dean's office and the department that offers the course.

Refer to the Admission Policies chapter for further requirements for transfer students.

## Changing Majors

Students requesting transfer from another college within the university into the B.S.B.A. degree programs in the John L. Grove College of Business are required to have completed a minimum of 12 credit hours with at least a 2.0 overall and business core cumulative quality point average, including a C or higher in MAT 140A / MAT 140B - College Algebra Credits: 3 and/or MAT 181 - Applied Calculus Credits: 3 (or higher) or a math placement level of 5 or higher, a C or higher in ENG 114 - Writing Intensive First-Year Seminar Credits: 3, and must obtain the approval of the department chair of the new major and the dean. First semester freshmen, excluding individuals testing at the advanced level in mathematics, must follow university policy and wait until the second semester to request approval to transfer. Admission to a specific major, at any given time, may be limited.

Students requesting to transfer from one major to another within the John L. Grove College of Business are required to have a minimum 2.0 cumulative quality point average and must obtain approval of the department chair of the new major and the dean. Refer to the Academic Policies chapter under Changing Majors for further information.

## Business Administration B.S.

The business administration curriculum at Shippensburg University is designed to prepare students for management careers in business and the professions. The curriculum also provides the basis for graduate study in business, public administration, and law.

Because effective managers must be cognizant of the societal and environmental contexts of their decisions, the study of business administration requires a thorough grounding in the humanities, social sciences, and natural sciences. Therefore, a significant portion of a student's program is devoted to general education. Students are encouraged to seek advisement in developing a general education program which is suited to their individual needs and interests. Each student in the John L. Grove College of Business is assigned a faculty member through his or her departmental office for advisement purposes.

The completion of a minimum of 120 credit hours is required for graduation in the B.S.B.A. major degree programs. The specific course requirements for each B.S.B.A. degree program of study are outlined under the following sections titled *B.S.B.A. Core Requirements and Major Course Requirements*.

The first phase of business administration curriculum is a required common core and the second phase is completing the common core and the course requirements for one of the majors in the John L. Grove College of Business. The curriculum seeks to avoid narrow technical instruction; rather, the goal is to develop the analytical and conceptual skills necessary for successful management in a variety of situations. The core represents a consensus of what academicians

and practitioners consider to be a common body of knowledge for managers of all types, while specialization majors permit the acquisition of more advanced knowledge in a selected area.

## Quality Point Average Requirements

Students in the B.S.B.A. program are required to meet the following academic standards in order to be in good academic standing and to graduate. Refer to the Academic Policies chapter under Grading and Graduation Requirements for further information.

1. Maintain a 2.0 or better cumulative quality point average in all courses taken.
2. Maintain a 2.0 or better cumulative business quality point average which includes all the business core courses.
3. Maintain a 2.0 or better cumulative major quality point average which includes all major course work and any business core courses within the major discipline.

## English Requirements

All John L. Grove College of Business majors, including B.S.B.A., candidates, must complete ENG 114 Writing Intensive First-Year Seminar or ENG 115 Advanced Placement Writing, with a C grade or better in order to graduate and before scheduling upper-division business courses.

## Curriculum Requirements

Due to the communication and quantitative skills required in the business curriculum, it is recommended students complete at least three years of college preparatory writing and mathematics in high school. Students seeking admission into the John L. Grove College of Business who lack these skills may find it necessary to take some remedial course work in writing and/or mathematics before enrolling in either ENG 114 Writing Intensive First-Year Seminar or MAT 140A/MAT 140B College Algebra.

All B.S.B.A. students are required to complete the general education requirements, the B.S.B.A. Core Requirements, and at least one of the sequences listed under Major Course Requirements.

## Course Sequencing

The subject matter of the business administration degree program is largely cumulative, i.e., a significant proportion of advanced course content presupposes reasonable mastery of more elementary concepts. (This is especially true in the areas which rely heavily on applied mathematics and the behavioral sciences.) As a result, many advanced courses have prerequisites which are indicated in the course descriptions. Early in their careers within the Foundations of Business Administration course, students should develop, with the aid of their faculty advisor, a four-year course plan which ensures the appropriate prerequisites will be met and all graduation requirements will be satisfied.

For a variety of reasons, these plans will vary considerably from student to student. Nevertheless, there are some general rules which should be adhered to in developing the course plan:

1. BSN 101 - Foundations of Business Administration Credits: 2 should be taken in the first year.
2. MAT 140A/MAT 140B College Algebra, if required, MAT 181 - Applied Calculus Credits: 3 and SCM 200 - Statistical Applications in Business Credits: 3, should be completed by the end of the sophomore year.
3. MIS 142 - Business Computer Systems Credits: 3 should be completed the first year and BSL 261 - American Legal Environment Credits: 3 should be completed by the end of the sophomore year.

4. The ACC 200 - Fundamentals of Financial Accounting Credits: 3, ACC 201 - Managerial Accounting Credits: 3, and ECO 113 - Principles of Economics Credits: 4, should be taken by the end of the sophomore year.
5. Any 300-/400-level B.S.B.A. core and major course work should primarily be taken during the junior and senior years.

## **Business Administration-Major Undecided Option**

The Business Administration-Major Undecided option is designed for students entering the John L. Grove College of Business who are undecided about the selection of a specific B.S.B.A. major. Since the course work in the B.S.B.A. degree program is basically the same for all majors through the sophomore year of study, the Business Administration-Major Undecided option provides students with an opportunity to take up to two years or 60 credits before officially declaring a specific B.S.B.A. major in the John L. Grove College of Business. Students are encouraged to select a specific B.S.B.A. major prior to beginning their junior year of study. Admission to a specific business major, at any given time, may be limited.

A student electing the Business Administration-Major Undecided option is assigned a full-time faculty member in the John L. Grove College of Business to assist with selecting a major, scheduling, and addressing other academic concerns. In the required Foundations of Business Administration course, students are also encouraged to utilize other services at the university to assist them in selecting a major, such as the Career Center's Career Education program, the Alumni Career Services program, and involvement in academic student professional organizations in the John L. Grove College of Business.

## **Accounting/Management Information Systems Department**

The department offers B.S.B.A. degrees in Accounting and Management Information Systems.

### **Bachelor of Science in Business Administration**

#### **Accounting, B.S.B.A.**

The goal of the accounting program is to provide students with the knowledge and skills expected of accountants today for the accomplishment of successful and rewarding careers.

In order to achieve this goal, students are exposed to both theoretical and practical accounting material with appropriate emphasis being given to logical reasoning and communication (written and oral) skills and the study of information systems and international practices.

The undergraduate program for a B.S.B.A. degree in accounting requires the completion of a minimum of 120 semester hours, which includes the satisfactory completion of the following six required courses and one accounting elective:

#### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (18 crs.)

- ACC 306 - Tax Accounting Credits: 3
- ACC 310 - Intermediate Accounting I Credits: 3
- ACC 311 - Intermediate Accounting II Credits: 3
- ACC 312 - Cost Determination and Analysis Credits: 3

- ACC 404 - Auditing Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3  
*Students who double major in ACC and MIS take MIS 355 instead of MIS 300*

## Accounting Electives (3 crs.)

(One course from the following 3-credit courses)

- ACC 401 - Advanced Accounting Credits: 3
- ACC 406 - Advanced Tax Accounting Credits: 3
- ACC 412 - Advanced Cost Analysis and Control Credits: 3
- ACC 490 - Selected Topics in Accounting Credits: 3

### Note:

A student graduating with a major in accounting must be proficient in the use of microcomputers to function effectively in the accounting profession. In order to develop the proficiency expected of an accounting graduate, assignments will be given throughout the accounting program which require the use of a microcomputer. By the middle of the sophomore year a student majoring in accounting will be expected to have acquired a personal computer which is compatible with the hardware and software used by the Department of Accounting. Our computer labs, though well-equipped, are utilized by all college of business students. Due to this high demand, a personal computer is invaluable in fulfilling accounting major course requirements.

## Accounting Career Opportunities

The accounting program is designed to prepare students for national and international careers in professional, industrial, and non-profit accounting. The Accounting Department is cognizant of developments in the academic and professional accounting areas to ensure the curricula and teaching methods are of the highest standards.

## Accounting B.S.B.A./M.B.A. Five-Year Program

An accelerated B.S.B.A./M.B.A. program is proposed for students who are qualified on the basis of scholastic aptitude, academic performance, and accounting-related work experience. Students who qualify for the program may earn both the bachelor's and master's of Business Administration within a total period of ten semesters and two summer sessions. Students would be admitted provisionally at beginning of their fourth year upon meeting the admission requirements.

## Management Information Systems, B.S.B.A.

Effective information is an integral part of any successful organization. The development and administration of an effective information system requires competency in both technological skills and business knowledge. As such, management information systems professionals utilize tools, techniques, and concepts of various disciplines such as computer science, management science, and organizational behavior. These interdisciplinary tools, combined with an understanding of the basic needs of an organization, enable the information system professionals to apply computer technology to solve a wide range of business problems. Management information systems (MIS) professionals frequently interact with individuals in many functional areas of an organization to analyze information needs and requirements and to serve as a liaison with computer systems personnel.

## B.S.B.A. Core Requirements



All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (18 crs.)

- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 340 - Business Programming Credits: 3
- MIS 344 - Business Systems Analysis and Design Credits: 3
- MIS 355 - Database Applications Credits: 3
- MIS 420 - Telecommunications and Distributed Processing Credits: 3
- MIS 446 - Applied Project Management Credits: 3

## Optional Electives

- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 399 - Introduction to Corporate Cybersecurity Credits: 3
- MIS 442 - Electronic Commerce and Technology Integration Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1

## MIS Career Opportunities

Career positions appropriate for an MIS graduate include systems analysts, database administrator, network specialist, web designer, software engineer, programmer/analyst, project manager, and technical trainer. Successful MIS professionals can advance to senior management and executive-level positions such as information systems manager, chief information officer, and chief executive officer. Those with work experience and considerable expertise may find lucrative opportunities as independent consultants, or may choose to start their own firms.

The Department of Labor predicts that management information systems-related jobs are expected to grow much faster than the average for all occupations between 2008 and 2018. Demand for MIS professionals stays strong in the foreseeable future as organizations continue to adopt and integrate increasingly sophisticated technologies into their business activities. In addition, various studies find MIS graduates among the highest paid college graduates.

# Finance/Supply Chain Management Department

## Bachelor of Science in Business Administration

### Finance, B.S.B.A.

Finance is the study and practice of making money-denominated decisions. Individuals, business corporations, and government agencies located worldwide are all concerned with securing, managing, and investing funds efficiently; i.e., they must practice sound financial decision making. As a discipline, finance can be classified into six areas: corporate financial management, investments, financial institutions and markets, banking and insurance, personal financial planning, and real estate investment and valuation. The finance program at Shippensburg University offers a full range of courses in these areas. Our program is unique in the emphasis placed on the application of finance concepts. In addition to two applied courses in market, company, and security analysis, the finance major can apply for admission to the Investment Management Program class. In this class students utilize their accumulated knowledge and skills in the management of a real-money investment portfolio.

By the beginning of the sophomore year, a student majoring in finance will be expected to have access to a personal computer which is compatible with the hardware and software used in the finance program. Our computer labs, though well-equipped, are utilized by a large percentage of students from the college of business. Due to this high demand, a personal computer is invaluable to fulfilling the major finance course requirements.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

### Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (12 crs.)

- FIN 312 - Investments Credits: 3
- FIN 313 - Advanced Financial Management Credits: 3
- FIN 314 - Financial Institutions Credits: 3
- FIN 333 - Applied Company and Security Analysis Credits: 3

## Electives (6 crs.)

(Two courses from the following 3-credit courses)

- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 322 - Estate Planning Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 393 - Selected Topics in Finance Credits: 1-3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- FIN 414 - Bank Management Credits: 3
- FIN 421 - Personal Financial Planning Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- FIN 434 - Investment Management Program Credits: 1-3
- FIN 435 - Investment Management Program Credits: 1-3
- FIN 442 - Derivatives Markets Credits: 3
- FIN 490 - Selected Topics in Finance Credits: 1-3

## Finance Career Opportunities

Students develop a wide range of analytical skills with both theoretical and real problems and can, therefore, choose a career within a full spectrum of jobs: corporate financial analyst (revenue and capital budget), financial planner, security analyst, portfolio manager or analyst, pension fund manager, security broker or dealer, banking industry analyst, mortgage analyst, corporate risk manager, or consultant on mergers and acquisitions.

Shippensburg University graduates who majored in finance have obtained responsible positions in major corporations, profit and non-profit, and positions in a variety of major and regional banks and other financial institutions.

For those students with a concentration in real estate, career opportunities are available in a wide array of firms. For example, a graduate may take a position with a real estate development firm, a financial institution or real estate investment firm, a real estate brokerage firm, a real estate management firm, or an appraisal firm. There are also a wide variety of job opportunities in the non-profit or governmental sector for a student with an expertise in real estate.

## **Finance, Personal Financial Planning Concentration, B.S.B.A.**

### B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Personal Financial Planning Concentration

Personal financial planning is the process of managing financial resources to achieve individual goals. It is a six-step process-determine current financial conditions, develop financial goals, identify alternative courses of action, evaluate alternatives, create and implement a financial plan, and evaluate and revise the plan. The basic elements of personal financial plan include cash flow/budgeting analysis, insurance needs, employee benefits, education funding

requirements, investment decision, analysis of debt, portfolio analysis, retirement planning, forecasting retirement benefits and costs, income tax planning, and estate planning.

## Required (21 crs.)

- FIN 312 - Investments Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 421 - Personal Financial Planning Credits: 3
- FIN 322 - Estate Planning Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- FIN 333 - Applied Company and Security Analysis Credits: 3
- ACC 306 - Tax Accounting Credits: 3

## Personal Financial Planning Career Opportunities

The field of financial planning is experiencing substantial growth. The public's need for professional financial advice has been increasing drastically due to the changes in demographics and financial regulation. *U.S.News* and *World Report* lists personal financial planning as one of the 20 hot jobs for the 21st century. With a specialty in personal financial planning, you can choose a career within a full array of jobs. Typically, you can be a self-employed financial advisor or work for depository and non-depository financial institutions such as banks, saving institutions, credit unions, brokerage firms, investment companies, and insurance agencies. Alternative options include accounting firms, law offices, and human resource and employee benefit departments, among others. Current salaries are highly competitive and the current average income for experienced financial planners depends upon the specific career option selected and the geographic region. U.S. Department of Labor reports the median annual earnings of personal financial advisors was \$56,680.

## Supply Chain Management, B.S.B.A.

Supply Chain Management involves the strategic integration of diverse business facilities, functions, and activities throughout the supply chain for the purpose of providing goods and services to customers as efficiently as possible. Achieving efficiency in the supply chain is accomplished by developing knowledge of transportation, inventory control, warehousing, material handling, purchasing, production control, and the tools necessary to analyze and coordinate these activities. The concept of total cost analysis (taking all costs into account before making decisions), and cost trade-offs (letting one or more costs rise to take advantage of greater savings in other costs) is also central to supply chain management. These concepts, once honed, apply to many facets of business and personal decision making.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (15 crs.)

- SCM 315 - Strategic Procurement Credits: 3
- SCM 355 - Managing Quality and Continuous Improvement Credits: 3
- SCM 370 - Integrated Supply Chain Systems Credits: 3
- SCM 380 - Data Mining for Supply Chain Management Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

### Electives (3 crs.)

(One course from the following 3-credit courses)

- ACC 312 - Cost Determination and Analysis Credits: 3
- ECO 355 - Environmental Economics Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 450 - Negotiation Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 446 - Applied Project Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- SCM 390 - Strategic Warehouse Management Credits: 3
- SCM 410 - Distribution Systems in Supply Chains Credits: 3

## Supply Chain Management Career Opportunities

Graduates with a Supply Chain Management background can find employment in a wide range of occupational specialties including logistics, warehousing management, transportation management, operations and production management, purchasing, inventory control, and customer service to name but a few. Salaries for recent graduates in supply chain programs, according to several surveys, rank near the top among the various business majors. Supply Chain Management also plays a central role in the global economy. Many job opportunities are available which involve developing and maintaining the international supply chain.

## Supply Chain Management, Logistics Management Concentration, B.S.B.A.

Supply Chain Management involves the strategic integration of diverse business facilities, functions, and activities throughout the supply chain for the purpose of providing goods and services to customers as efficiently as possible. Achieving efficiency in the supply chain is accomplished by developing knowledge of transportation, inventory control, warehousing, material handling, purchasing, production control, and the tools necessary to analyze and coordinate these activities. The concept of total cost analysis (taking all costs into account before making decisions), and cost trade-offs (letting one or more costs rise to take advantage of greater savings in other costs) is also central to supply chain management. These concepts, once honed, apply to many facets of business and personal decision making.

### B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.



## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Logistics Management Concentration

Logistics is that part of Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements. Logistics activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network

design, inventory management, supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution-strategic, operational and tactical. Logistics is an integrating function, which coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology.

## Required (12 crs.)

- SCM 370 - Integrated Supply Chain Systems Credits: 3
- SCM 390 - Strategic Warehouse Management Credits: 3
- SCM 410 - Distribution Systems in Supply Chains Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

## Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ACC 312 - Cost Determination and Analysis Credits: 3
- ECO 355 - Environmental Economics Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 450 - Negotiation Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 446 - Applied Project Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- SCM 315 - Strategic Procurement Credits: 3
- SCM 355 - Managing Quality and Continuous Improvement Credits: 3
- SCM 380 - Data Mining for Supply Chain Management Credits: 3

## Logistics Career Opportunities

Logistics is the universal thread or pipeline that plans and coordinates the delivery of products and services to customers all over the world. Logistics professionals manage and coordinate activities in this global pipeline to ensure an effective and efficient flow of materials and information from the time a need arises until it is satisfied and beyond. The demand for logistics managers at all levels is excellent. The Collegiate Employment Research Institute reports that logistics is a field with more positions than graduates each year. *The Wall Street Journal* reports that senior logistics

management talent is also in short supply. As logistics managers' roles and value have grown, the need for well-educated, talented professionals with a diverse array of skills has emerged. Earning potential for logistics managers is excellent! In addition to receiving outstanding salaries, logistics managers receive a full range of valuable benefits and most are eligible for bonus pay. A recent study by William M. Mercer, Inc., indicates that more than 85 percent of logistics managers can earn incentive pay in addition to their base salary. It is also important to note salaries for logistics managers have risen each of the last five years according to annual surveys conducted by Ohio State University and Cahners Research.

## **Management/Marketing/Entrepreneurship Department**

### **Bachelor of Science in Business Administration**

#### **Entrepreneurship, B.S.B.A**

The Entrepreneurship program is focused on opportunity identification, enhancement, and realization to create value for all stakeholders. The point of view for all entrepreneurship ventures is the "owner," but it has evolved to include companies and organizations of all types and stages. The skills a student learns through an entrepreneurship major are vital for the success of any business--large or small, public or private, corporate or not-for profit, local or global. The major conveys a broad skill-set for business, while it also provides students with customized paths for success in specific business systems including new ventures, franchises, corporate ventures, socially responsible companies, and family-controlled enterprises.

#### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

#### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

#### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3

- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (15 crs.)

- ENT 336 - Product Design & Development Credits: 3
- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 431 - Corporate Entrepreneurship Credits: 3
- ENT 432 - Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3

### Electives (3 crs.)

(One course from the following 3-credit courses)

- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 450 - Negotiation Credits: 3
- MGT 470 - International Management Credits: 3
- MGT 490 - Selected Topics in Management Credits: 1-3
- MGT 498 - Strategy Implementation Credits: 3
- MKT 370 - Services Marketing Credits: 3
- MKT 430 - Marketing Research Credits: 3

## Entrepreneurship Career Opportunities

Entrepreneurship is what powers the economy, and students develop the skills and contacts necessary to make ideas real. An entrepreneurship major from Shippensburg University will prepare students for any one of the following career tracks: corporate entrepreneurship, also known as intrapreneurship, where our graduates develop new operations or products for existing corporations; independent entrepreneurship, where our graduates start their own for-profit firms; family business, where our graduates go into the family firm as new or future management; and social entrepreneurship, where our graduates start new or develop existing not-for-profit or community service oriented firms.

More specifically, when company recruiting ads use words like leading-edge or talk about developing new products or markets, they are talking about corporate entrepreneurship. When government and civic organizations talk about becoming more innovative and proactive, they are building on the growing social entrepreneurship movement. As always, if you have an idea of your own, for a product, a service, or just a way of life for yourself, there is no alternative to going independent. For any of these goals, an entrepreneurship major from Shippensburg University can get you where you want to be.

## **Management, Human Resources Management Concentration, B.S.B.A.**

The human resource management concentration covers the fields of personnel management, industrial relations, and training. The program is designed to provide students with a solid understanding of the wide range of opportunities in the field. The courses emphasize both the theoretical aspects and the practical skills needed for success in the field. By careful selection of elective courses, students can design a program to suit their individual career interests.

### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3

- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (12 crs.)

- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 346 - Human Resource Management Law Credits: 3
- MGT 348 - Compensation Administration Credits: 3

### Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 431 - Corporate Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- MGT 349 - International Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 450 - Negotiation Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3

## Human Resource Management Career Opportunities

The Department of Labor continues to project a strong demand for entry-level jobs in the human resource management field. Human resource management is among the top paying fields. Graduates of the program are prepared to begin their careers in the human resource management departments of corporations or government agencies as trainees,

recruiters, compensation specialists, job analysts, grievance counselors, and arbitration managers. The program provides a solid foundation for graduate study in the fields of personnel, industrial relations, human resource management, and organizational development.

## **Management, International Management Concentration, B.S.B.A.**

Firms, large and small, have the opportunity to participate in worldwide business ventures, whether through exporting, importing, international trade, or by manufacturing or setting up service operations overseas. The firms also face the challenges of competition from foreign companies.

The international management concentration provides students with a better grasp of the opportunities and challenges, and facilitates functioning in an international environment. The program provides exposure to the cultures of various countries, development of competence in at least one foreign language, and training in a broad range of management and business theories and skills relevant to international operations.

### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

#### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

#### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

## Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (12 crs.)

- MGT 340 - Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 470 - International Management Credits: 3
- MKT 360 - International Marketing Credits: 3

## Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ANT 220 - Anthropology for International Studies Credits: 3
- ECO 321 - International Economics Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- GEO 101 - World Geography Credits: 3
- MGT 349 - International Human Resource Management Credits: 3
- PLS 141 - World Politics Credits: 3

## Note:

Only one of ANT 220, GEO 101, or PLS 141 may be counted as a major elective course.

## International Management Language Requirement (12 crs.)

Twelve credits in one modern language beyond the beginning level (other than one of the literature courses) shall be elected by the student. All four courses must be taught in the selected language. At least one commercial course (e.g., FRN 320, GER 215, SPN 330) shall be among the four courses selected by the student. Students in International Management must achieve an intermediate level on the ACTFL (American Council on the Teaching of Foreign Languages) Oral Proficiency Interview. The competency examination must be completed no later than the middle of their senior year (105 credits).



## International Management Career Opportunities

The program prepares students for job opportunities in government agencies, multinational corporations, or firms of all sizes with international operations. The program also provides a solid foundation for the pursuit of graduate study.

## Management, Management Concentration, B.S.B.A.

The Management program provides the student with a broad understanding of a variety of systematic business practices, techniques and philosophies. The program stresses the mastery of key managerial concepts from the perspective of how they affect the behavior, performance and satisfaction of individuals and how individual performance and satisfaction contribute to organizational efficiency and effectiveness. Special attention is devoted to the necessity of adapting to environmental conditions and the implementation of corporate strategic objectives.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (15 crs.)

- ENT 431 - Corporate Entrepreneurship Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 498 - Strategy Implementation Credits: 3

### Electives (3 crs.)

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 432 - Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 450 - Negotiation Credits: 3
- MGT 470 - International Management Credits: 3
- MGT 490 - Selected Topics in Management Credits: 1-3

## Management Career Opportunities

Completion of the management program facilitates employment potential in both manufacturing and service firms. Industrial and retail sales positions, with a career orientation toward sales management, are also likely. The program also provides a solid foundation for graduate study.

## Marketing, B.S.B.A.

The marketing program is designed to provide students with the tools necessary to implement marketing strategies and policies. The program provides an optimum balance between theory and practice. Due to the designed flexibility of the program, students have the opportunity to tailor a marketing program of study to best fit their individual career interests.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (9 crs.)

- MKT 306 - Buyer Behavior Credits: 3
- MKT 430 - Marketing Research Credits: 3
- MKT 495 - Marketing Analysis and Strategy Development Credits: 3

## Electives (9 crs.)

Three courses from the following 3 credit courses:

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 315 - Sales Management Credits: 3
- MKT 325 - Advertising and Promotional Strategy Credits: 3
- MKT 335 - E-Marketing Credits: 3
- MKT 340 - Tourism and Events Planning Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 352 - Principles of Retailing Credits: 3
- MKT 360 - International Marketing Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- MKT 380 - Sports Marketing Credits: 3
- MKT 390 - Selected Topics in Marketing Credits: 1-3
- MKT 490 - Selected Topics in Marketing Credits: 1-3

## Marketing Career Opportunities

Marketers are in demand as the field of marketing is pervasive in our society. It is a critical function in all organizations. Examples of fields seeking marketing professionals are: e-business, advertising, business-to-business marketing, consulting, international marketing, marketing research, retail management, sales and sales management, supply chain management, and transportation. Shippensburg marketing graduates are sought regularly by employers and they are also well prepared for further pursuit of their educations at top graduate schools across the nation.

## Minor

### Entrepreneurship Minor

The Entrepreneurship minor provides students with the same basic business knowledge and skills as the Business Minor, but with a strong emphasis on innovation and problem-solving. Students will be exposed to entrepreneurial thinking, opportunity identification, capital funding, and other aspects of the entrepreneurial process applicable in business start-ups, as well as in existing businesses, governmental organizations, and nonprofits. This minor will prepare students to succeed as innovators and value creators in a rapidly changing world.

The minor is made up of six courses, five of which are required. Three of the five required courses provide an essential background in the fundamental business disciplines most necessary for the entrepreneur -- accounting, finance, and marketing. The two remaining required courses focus on the basics of entrepreneurship and managing small businesses. An elective course allows the student to explore further in entrepreneurship, marketing, or management.

18 (crs.)

### Required Courses (15 crs.)

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- FIN 311 - Financial Management Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

### Electives (Select One):

- ENT 336 - Product Design & Development Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 370 - International Business Credits: 3
- MKT 370 - Services Marketing Credits: 3

## Business Department

### Minor

### Business Minor

In order to be admitted to the minor, you must successfully complete the general education prerequisites for the program. The first prerequisite is completion of ECO 113 Principles of Economics, ECO 102 Principles of Microeconomics or ECO 101 Principles of Macroeconomics with a C or better. The second prerequisite is the completion of MAT 140A/MAT 140B College Algebra or MAT 117 (taken at Shippensburg University) with a C or better or a higher level mathematics course or a math placement level of 5 or higher.

The business minor consists of four required core business courses and two business elective courses. The four required courses provide you with a solid fundamental background in business. In addition, these foundation courses will apply directly toward meeting some of the requirements of most MBA programs if you decide to pursue a master's degree in business later. The two elective courses in business allow you to tailor the minor to complement your major and to develop an area of specialization to further enhance future employment opportunities.

Numerous studies have shown a high percentage of students, regardless of major, end up pursuing careers in business or careers that require an understanding of business. No matter what career path you take after graduation, whether self-employed or working for an organization, the business concepts and skills you gain from the business minor will help to expand your opportunities and ensure your success.

18 crs.

### Required Core Courses

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- FIN 311 - Financial Management Credits: 3

- MGT 305 - Organizational Behavior Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

## Elective Business Courses

Two (2) College of Business courses with advisement and completion of prerequisites.

Interested students are encouraged to check out the John L. Grove College of Business website at [www.ship.edu/business](http://www.ship.edu/business) for more information on the business minor. To apply for the business minor, students should stop by Grove Hall 128 to complete an application.

## College of Education and Human Services

The College of Education and Human Services offers programs leading to Bachelor of Science degrees in criminal justice and exercise science, and a Bachelor of Social Work. It also offers undergraduate students the opportunity to earn a Bachelor of Science in Education degree and to qualify for certification to teach in the public schools of Pennsylvania. Students can choose programs leading to a degree and certification in either Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8, Secondary Education. Teacher education candidates may also earn Environmental Education Certification.

The Military Science Department (Army Reserve Officers Training Corps) provides the opportunity for students of all majors to earn a commission in the United States Army. Available to men and women, the Army ROTC program develops students' ability to organize, motivate, and lead others.

Graduate programs in counseling, criminal justice, educational leadership and special education, social work, and teacher education are presented in the *Graduate Catalog*, which may be obtained by writing to the dean of Graduate Studies or visiting the website [www.ship.edu/catalog](http://www.ship.edu/catalog).

## Certification of Teachers

To insure a consistently high quality of instruction in the public schools of the Commonwealth, all teachers are required by law to have a teaching certificate. This legal permit to teach is issued by the Pennsylvania Department of Education to an individual who has completed certain specific course requirements in the area or areas of instruction indicated. Specific undergraduate curricula of the university prepares students to be sponsored for initial teacher certification. Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8, and secondary education programs prepare teachers for the Commonwealth.

Pennsylvania Standards for Teacher Certification require that teacher certification candidates must achieve a QPA of 3.0 at the accumulation of 48 credit hours of college level work and must pass all mandated state required assessments (i.e., Praxis, PAPA, PECT) prior to achieving Professional Standing. Once Professional Standing is achieved, students may enter 300 and 400 level education course work and are officially teacher candidates.

To complete an approved course of study for teacher certification at Shippensburg University, all teacher candidates must achieve passing scores in all sections of the required assessments prior to student teaching. Ninety-seven percent of students who complete the Shippensburg University program pass all aspects of these tests. In addition, to be recommended for certification, a 3.0 QPA for all course work at the university must be attained prior to graduation.

## Teacher Education

Teacher education programs at Shippensburg University prepare competent professionals for teaching and for leadership positions in a variety of educational settings and institutions. They can systematically design, implement, and continually evaluate and revise instructional programs to meet the lifelong learning needs of the communities they serve. The responsibility for an effective program is a shared one that relies upon the cooperation and enthusiastic participation of the wider university community. Each certification program includes a balanced offering of a foundation in general education, an intensive study of a teaching specialty and a planned sequence of professional experiences designed to explore the theory and practice of teaching.

On completion of a teacher education program a student should have attained the following:

- Understanding of the teacher as a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
- Knowledge of the scope and basic principles of the natural sciences and mathematics, the social sciences, and the humanities and arts as these disciplines represent human achievement and enlightenment.
- In-depth knowledge in at least one academic discipline or teaching specialty and ability to identify, select, and/or develop materials of instruction, which provide data needed for the development of basic concepts and generalizations in the discipline/specialty.
- Effective communications skills (listening, speaking, reading, writing, perceiving) and human relations skills that promote human worth, dignity, and ethnic understanding.
- Skills in assessing and evaluating the affective, cognitive, and performance needs of students and the ability to implement materials and methods of instruction, which can be used by students with different abilities, interests, learning styles, personality characteristics, and ethnic backgrounds.
- Understanding of the world of work and the process by which students identify the relationship between dimensions of self (heredity, interest, values) and future (potential) work roles.
- Ability to work effectively with parents, paraprofessionals, other professional personnel, and community groups in developing a sound instructional program for all students.
- Ability to participate effectively in professional, political, and service groups concerned with the solution of contemporary professional, social, political, and economic problems.

## Intergroup Education

The State Board of Education "... encourages all school districts in the Commonwealth to provide a long-range program of intergroup and human relations education designed to improve each pupil's knowledge of and sensitivity to the social groups that make up our pluralistic society. In addition, the board requires all teacher education institutions provide similar instruction for all prospective teachers."

The faculty and administration of the College of Education and Human Services at Shippensburg University firmly support the position teachers must be knowledgeable about the societal issues created by cultural pluralism and skilled in working with multi-ethnic groups. As a result, students in the teacher education curriculum are expected to build into their academic programs opportunities to learn about cultural diversity in the United States and the world and to plan supplementary field and work experiences to develop the skills needed to work with culturally mixed groups.

Students are required to take at least one three-credit course which is devoted primarily to the study of some aspect of Africa, Asia, Latin America, the Middle East, or the non-white peoples of North America and which incorporates a diversity of perspectives on culture. Such a course is intended to extend the students' informational background and develop sensitivity to cultural differences. If properly planned, the course(s) selected could be fitted into the general education requirement each student must complete.

Suitable field experiences in education and summer work experiences should be used to supplement such course work.

# Secondary Education Curriculum

The College of Education and Human Services provides programs for the preparation of teachers in the secondary schools in cooperation with the College of Arts and Sciences. Policies and guidelines for teacher education programs are developed by an all-university Teacher Education Council. Here, representatives from all colleges concerned with teacher preparation work together to develop integrated training programs involving total university participation.

The secondary student's program is cooperatively planned and supervised by the College of Education and Human Services and by the college of the student's academic major. The faculty advisor is assigned from the student's major field. The student must meet graduation requirements and the requirements for admission, retention, and graduation in a teacher certification program as specified by the College of Education and Human Services and by the college of his/her major. Faculty from academic departments assigned to teach secondary professional education courses and supervise student teachers must have the approval of the dean of the College of Education and Human Services.

A student in the secondary education curriculum is educated in depth in at least one area of knowledge which he/she is then licensed to teach. This area of concentrated study is supplemented with studies in related fields which are selected with advisement. Through consultation with advisors and the department chair, students are responsible for choosing the proper course combinations to qualify them for admission to professional standing, admission to student teaching, and for graduation and Instructional Level I certification.

The Pennsylvania Department of Education requires a 3.0 quality point average must be maintained throughout a student teacher's preparation program. The PDE requires a 3.0 quality point average for certification candidates. Additional requirements for majors in secondary educational fields may be found in the curricular material of the separate colleges indicated as follows:

## Arts and Sciences

Biology  
Chemistry  
Earth and Space Science  
English  
French  
Mathematics  
Physics  
Social Studies-Geography  
Social Studies-History  
Spanish

Interdisciplinary Additional Certifications

Environmental Education  
General Science

## Required Professional Education Courses



# Required Courses

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- Required field experience see advisor
- Methods I and II courses
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- 

# Required Field Experiences

Field service hours are an integral part of our teacher preparation programs. It is the responsibility of students to work with academic advisors to fulfill requirements for all field experiences. Stage One field experiences begin during freshman and/or sophomore years. Foundational courses in all programs include observation strategies and protocol for working in school districts. Several education courses require observation hours. Students observe, tutor, and assist teachers in assigned schools.

Students apply for Professional Standing during junior and senior years. To achieve Professional Standing, students must maintain a 3.0 QPA, complete Stage One field work, pass Praxis I basic skill assessments, have the recommendation of academic advisors, and apply to become a teacher candidate. Once Professional Standing is achieved, students begin Stage Two field placements. During Stage Two field work, students plan lessons and units, co-teach classes, and have more intensive classroom involvement.

Stage Three field experience is student teaching, which is 16 weeks in classrooms. To enter student teaching, students must complete all teacher preparation program requirements as well as pass all Praxis exams.

Assignments for student teaching are completed with the approval of the Director of Field Services for the College of Education and Human Services. Students attend a Student Teaching Application meeting held in October of each year. Students apply one academic year prior to when they plan to student teach. Prerequisites for student teaching are published by the Office of Field Services, are available in departmental offices, and listed on the website [www.ship.edu/COEHS/Field\\_Services/Office\\_of\\_Field\\_Services](http://www.ship.edu/COEHS/Field_Services/Office_of_Field_Services). Graduates of other universities or others desiring certification or international student teaching and others who need special assignments must contact the Office of Field Services (717-477-1487) to schedule an appointment for program planning and approval by the dean and/or associate dean of the College of Education and Human Services.

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## **Criminal Justice Department**

The mission of the Criminal Justice Department is to provide current and future criminal justice professionals with a comprehensive background and skillset that will enable them to think critically about crime and justice and to be effective decision makers in the criminal justice field. The faculty strives to educate students to be critical thinkers who can communicate their thoughts effectively in an oral and written form, as well as to instill a comprehensive knowledge of the criminal justice system.

These objectives are achieved through a balanced approach in which both theoretical and practical issues of application are addressed. The curriculum is guided by the following needs: comprehensive knowledge of the field of criminal justice (both theoretical and practical), critical analysis, effective communication (oral and written), exposure to human and cultural diversity issues, ethical problem solving, and technology.

## **Criminal Justice Features**

The department is committed to developing and maintaining a curriculum that reflects the changing market forces behind the criminal justice system. The curriculum consists of 21 core credits, 21 criminal justice elective credits, a 3-credit capstone course, and 15 interdisciplinary course credits. Students are required to achieve a grade of C or above in all criminal justice courses.

Students are strongly encouraged to take advantage of the opportunity to participate in internships with government agencies, non-profit organizations, and private criminal justice enterprises. Internships provide an excellent opportunity for the practical application of skills and knowledge obtained in the classroom. Internships are a valuable career-building tool that enhance a student's resume and demonstrate field experience. A maximum of 12 internship credits may be used to fulfill degree requirements. Internships are available in the summer and during the academic year. To be eligible for an internship, the student must have completed 60 credits and have a minimum 2.0 QPA. The student is responsible for obtaining the required clearances; Pennsylvania State Police Background Check (ACT 34), Child Abuse Clearance (ACT 151), and proof of liability insurance are required before the internship will be approved by the Department Chair. Students whose internship has been approved will be scheduled by the department.

## **Criminal Justice Academic Advisement**

Students are encouraged to work with their faculty advisors throughout their educational process. Faculty members offer both academic and career advising. Faculty advisement and support goes beyond the scope of scheduling courses. Students can access their advisor's information by logging into the myShip web portal; advisement information is posted under the My Academics menu.

# **Criminal Justice Career Possibilities**

Completion of this strong and diversified program will enhance the student's chances for employment and advancement in both public and private organizations within the criminal and juvenile justice system. Criminal justice majors are eagerly recruited by a wide range of public and private sector organizations whose focus is the detection, reduction and correction of criminal behavior. These agencies exist at the local, state, and federal level and are constantly searching for individuals with the communication and analytical skills developed by this comprehensive criminal justice curriculum. Students frequently begin their criminal justice careers with local police departments, courts, or correctional institutions and advance to the state or federal level as they gain experience. For further information, contact the department at [crimjust@ship.edu](mailto:crimjust@ship.edu) or visit [www.ship.edu/Criminal\\_Justice](http://www.ship.edu/Criminal_Justice).

## **Bachelor of Science**

### **Criminal Justice, B.S.**

(60 crs.)

#### **Required Core (21 crs.)**

- CRJ 100 - Introduction to Criminal Justice Credits: 3
- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 221 - Policing a Democracy Credits: 3
- CRJ 241 - Survey of Corrections Credits: 3
- CRJ 309 - Theories of Crime and Crime Control Credits: 3
- CRJ 310 - Research Methods Credits: 3
- CRJ 452 - Race, Ethnicity, and Crime Credits: 3

#### **Criminal Justice Electives (21 crs.)**

- CRJ 321 - Criminal Investigation Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 336 - Introduction to Forensic Science Credits: 3
- CRJ 342 - Crime Prevention Credits: 3
- CRJ 345 - Organization & Management of CRJ Agencies Credits: 3
- CRJ 351 - Juvenile Justice Credits: 3
- CRJ 356 - Organized Crime Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 365 - White Collar Crime Credits: 3
- CRJ 370 - Mock Trial Credits: 3
- CRJ 390 - Selected Topics in Criminal Justice Credits: 3
- CRJ 393 - Selected Topics in Criminal Justice Credits: 3
- CRJ 396 - Selected Topics in Criminal Justice Credits: 3
- CRJ 397 - Selected Topics in Criminal Justice Credits: 3
- CRJ 411 - Terrorism Credits: 3
- CRJ 433 - Evidence Law Credits: 3
- CRJ 440 - Community Corrections Credits: 3

- CRJ 456 - Forensic Science: Evidence Analysis Credits: 3
- CRJ 461 - Social Construction of Homicide Credits: 3
- CRJ 463 - Comparative Criminal Justice Credits: 3
- CRJ 464 - Popular Culture, Crime and Justice Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- CRJ 471 - Internship in Criminal Justice I Credits: 3
- CRJ 472 - Internship in Criminal Justice II Credits: 3
- CRJ 473 - Internship in Criminal Justice III Credits: 3
- CRJ 474 - Internship in Criminal Justice IV Credits: 3
- CRJ 490 - Selected Topics in Criminal Justice Credits: 3
- CRJ 491 - Selected Topics in Criminal Justice Credits: 3

### Note:

CRJ 471, CRJ 472, CRJ 473, CRJ 474 Each 3 credit Internship = 120 hours of work

### Capstone Course (3 crs.)

- CRJ 454 - Policy, Professionalism, and Ethics Credits: 3

### Interdisciplinary Courses (15 crs.)

Students must complete five courses, 200-level or above. Criminal Justice or Military Science courses will not fulfill this requirement.

### Required General Education Courses (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Certificate

### Victimology and Victim Services Certificate

12 (crs.)

#### Required Courses (6 crs.)

- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 469 - Victim Treatment and Services Credits: 3

#### Electives at 300 or 400 level (Select Two) (6 crs.)

Please note these courses have the following 'required core' prerequisites: CRJ 309 & 310 .

- CRJ 342 - Crime Prevention Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 381 - Mental Health in the Criminal Justice System Credits: 3
- CRJ 398 - Selected Topics in Criminal Justice Credits: 3 \*
- CRJ 461 - Social Construction of Homicide Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- CRJ 471 - Internship in Criminal Justice I Credits: 3 \*

Note:

\* Courses require departmental approval.

## Minor

### Criminal Justice Minor

A minor in Criminal Justice provides the fundamental exposure necessary to understand the increasing complexity of the criminal justice system. To gain admittance into the Criminal Justice minor, the student must have 2.5 QPA or greater. All Criminal Justice courses must be passed with a grade of C or better. At least one Criminal Justice course must be taken in a face-to-face format: NO EXCEPTIONS. Non-majors are required to choose from the following courses:

18 crs.

#### Required

- CRJ 100 - Introduction to Criminal Justice Credits: 3

Complete two of the following courses at the 200 level:

- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 221 - Policing a Democracy Credits: 3
- CRJ 241 - Survey of Corrections Credits: 3

Required 300 level course:

- CRJ 309 - Theories of Crime and Crime Control Credits: 3

Complete two additional CRJ elective courses at the 300-400 level  
(excludes Internships)

Note:

CRJ 100, CRJ 211, CRJ 221, and CRJ 241 can be offered as summer online course.

# **Educational Leadership and Special Education Department**

The Department of Educational Leadership and Special Education promotes an education system that prepares professionals to meet the needs of students in a rapidly changing and diverse society. By maintaining close contact with constituents, alliances are constantly expanding with local school districts and other community agencies that seek to meet the education needs of individuals with disabilities. It is through many of these efforts, as well as collaborative training programs that the programs seek to improve educational services for all students by providing information dissemination, technical assistance, and professional services to local school districts and community agencies.

The special education programs at Shippensburg University are continually being evaluated to insure the education of professionals using a "best practices" model. The programs in special education are committed to preparing skilled and knowledgeable professionals to work in a variety of settings that serve the needs of students with disabilities in the least restrictive educational and societal environment.

Students who wish to obtain certification in special education have two options:

1. Enroll in the Dual Special Education/PreK-4 major. This option provides the opportunity to qualify for teacher certification in two areas - PreK-4 Early Childhood and PreK-8 Special Education.
2. Complete a PreK-4, 4-8, or Secondary Content area with teacher certification (e.g., English, Mathematics, Social Studies, or Science) and then enroll in the Masters of Special Education program to qualify to apply for certification in special education.

## **Exercise Science Department**

Exercise science involves the study of physical activity and how the body responds. The field is comprised of various subdisciplines including exercise physiology, biomechanics, motor behavior, and the psychology of physical activity. Students interested in the Exercise Science major should have a strong background in the sciences including biology, mathematics, chemistry, and physics.

Exercise scientists rely on scientific principles in these areas to advance their understanding of how the body responds to exercise and to advocate physical activity to prevent diseases such as diabetes and heart disease.

## **Exercise Science Career Possibilities**

Traditionally, exercise scientists have focused on enhancing athletic performance. Currently, exercise scientists also work and study in commercial, clinical, and workplace settings to increase health, fitness, and quality of life of the general population.

Employment opportunities include, but are not limited to, wellness program coordinators, cardiopulmonary rehabilitation specialist, group exercise instructor, biomechanist, exercise physiologist, corporate or recreational fitness director, certified personal trainer, certified strength and conditioning coach, exercise test technologist, sales or marketing of medical/fitness equipment, pharmaceuticals sales, geriatric recreational therapist. The following career paths are additional options for exercise science students, and may require further training and/or education: athletic trainer, dietitian or sports nutritionist, occupational or physical therapist, medical doctor or physician's assistant, nurse, researcher, academician, chiropractor.

## **Bachelor of Science**

# Exercise Science, B.S.

Transfer students, both internal and external, are selected for admission based on the following criteria:

- Academic proficiency in college or university course work, including a 2.75 QPA.
- Completion of 15 credits, including a C or better in BIO 161, BIO 162 or BIO 237
- Selection is competitive and students will be selected from those who fulfill the above requirements.

## Exercise Science Requirements (47-53 crs.)

- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 321 - Exercise Physiology I Credits: 4
- ESC 333 - Biomechanics Credits: 4
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 336 - Motor Behavior Credits: 3
- ESC 350 - Nutrition for Sport & Fitness Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3
- ESC 420 - Cardiac Rehab and Special Populations Credits: 4
- ESC 421 - Exercise Physiology II Credits: 4
- ESC 422 - Exercise Testing and Prescription Credits: 3
- ESC 424 - Internship Credits: 6-12
- Electives: Credits: 6-12 (Depending on Internship)

## Required General Education Courses

Students must complete the following courses as part of their general education requirements:

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- CHM 105 - An Observational Approach Credits: 3  
OR
- CHM 121 - Chemical Bonding Credits: 3 *and*
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- MAT 117 - Applied Statistics Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3  
OR
- WST 100 - Introduction to Women's and Gender Studies Credits: 3

Please Note:

Students taking CHM 121 will need to complete CHM 125 as an elective choice. Students taking PHY 121 will need to complete PHY 123 as an elective choice.

## Note:

All students are required to acquire certification by attending an American Red Cross (ARC) or American Heart Association (AHA) or National Safety Council (NSC) workshop at the students' expense. All students doing an internship must hold current certifications (at the students' expense): First aid, CPR certification, child abuse; criminal record, TB test, and proof of insurance liability.

**Students are required to achieve a grade of C or above in all Exercise Science courses.**

All students are required to take one certification examination at the student's expense. This examination must be completed before the student's diploma may be released. These include:

1. American College of Sports Medicine Certified Health Fitness Specialist exam (ACSM-HFS), or
2. American College of Sports Medicine Certified Personal Trainer exam (ACSM-CPT), or
3. National Strength and Conditioning Association Certified Personal Trainer (NSCA-CPT) exam, or
4. National Strength and Conditioning Association Certified Strength and Conditioning Specialist (NSCA-CSCS) exam.

## Certificate

### Power, Agility, and Group Exercise (PAGE) Certificate

#### Exercise Science Majors in PAGE Certificate (10 crs.)

- ESC 321 - Exercise Physiology I Credits: 4
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3

#### Non-Exercise Science Majors in PAGE Certificate (9 crs.)

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3

## Minor

### Coaching Minor

The coaching minor prepares coaches to work with athletic teams in youth sports, junior or senior high school sports, or in recreational sports settings.

The coaching minor prepares students to coach after school and to be employed by school districts as a coach. However it does not prepare teachers to teach physical education classes in a school setting. Many Shippensburg University students enroll in the coaching minor to supplement their chosen major. For example, Elementary Education majors who minor in coaching are trained to teach during the day and coach after school. Secondary Education majors also



select the coaching minor for the same reason. Biology majors who select the coaching minor have gone on to graduate school to study exercise physiology after graduation from Shippensburg University. Psychology majors with a Coaching minor have gone on to graduate school in sport psychology. Business majors with the coaching minor have gone on to graduate school in sport management and marketing. The coaching minor can be a stepping stone to many career options.

**Students are required to achieve a grade of C or better in all Coaching minor courses.**

*Education majors who student teach during their senior year are encouraged to declare the minor early.*

## Coaching Requirements - (18 crs.)

### Required Courses

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 325 - Sport Psychology Credits: 3
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 400 - Methods of Coaching Credits: 3

### Electives (Select One): (3 crs.)

- ESC 207 - Stress Management Credits: 3
- ESC 213 - Organization and Administration for Fitness and Sport Facilities Credits: 3
- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3
- SOC 275 - Sociology of Sport and Leisure Credits: 3

## Exercise Science Minor

The Exercise Science minor is designed to provide students with content from a breadth of disciplines in the exercise science field. The minor is ideal for students who are interested in broadening their experience and knowledge base in the study and analysis of principles related to human movement. Students will acquire new information on key domains of the field including exercise physiology, psychological approach to physical activity, acquisition of motor skills, nutrition principles and injury prevention and treatment strategies. Specifically, the minor provides students with an introductory grounding in physiologic principles that help us understand not only how human systems respond to exercise stress, but also how the body changes with chronic exercise stress. Students also benefit from applied learning experiences in all classes. Such opportunities allow students to apply course principles and to develop new skills.

**Students are required to achieve a grade of C or above in all Exercise Science minor courses.**

**Students must have a 2.5 or better overall GPA, C or better in Biology, and C or better in PSY 101 for admission.**

## Course Requirements (18 crs.)

### Prerequisites

- BIO 150 - Human Biology Credits: 3

- PSY 101 - General Psychology Credits: 3

## Required

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3

## Two of the three following:

- ESC 336 - Motor Behavior Credits: 3
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 350 - Nutrition for Sport & Fitness Credits: 3

# Military Science Department

## Army Reserve Officers Training Corps (ROTC)

Army ROTC is a program which combines courses in military science with summer training opportunities to transform students into U.S. Army officers. Upon successful completion of the program and graduation, cadets are awarded a commission as a second lieutenant in either the U.S. Army, the Army National Guard, or the U.S. Army Reserve.

## Scholarships

Army ROTC scholarships are offered for two, three, and four years. The four-year scholarships are awarded on a worldwide competitive basis to U.S. citizens who will be entering an institution as a freshman. Military science-enrolled or non-enrolled students may compete for three-year (starts in sophomore year) and two-year (starts in junior year) scholarships. Recipients receive full tuition, academic fees, book and supply expenses (not room and board), and a monthly stipend. Scholarship recipients incur a service commitment for active or reserve forces duty.

## Financial Assistance

Books and equipment for military science courses and the ROTC program are provided free of charge to all students. All juniors and seniors in the ROTC program (advanced course) and scholarship cadets are paid a tax-free stipend and receive other benefits.

## Academic Advisement

Students are encouraged to contact the Department of Military Science for information concerning the ROTC program. The military science department is available to discuss the program with interested students at 717-477-1782.

## The Four-Year Program

The Four-Year Army ROTC program is divided into two parts called the basic course and the advanced course.

The basic course (MIL 131/ MIL 132 and MIL 231/ MIL 232) 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. ROTC textbooks, uniforms, and other essential materials for the basic course are furnished to students at no cost. After they have completed 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. There is no military obligation incurred by students completing the basic course.

The advanced course (MIL 331/ MIL 332 and MIL 350/ MIL 351) is usually taken during the final two years of college. It includes instruction in management, tactics, ethics, and professionalism, and further leadership development. Textbooks and uniforms in the advanced course are also furnished to students at no cost.

During the summer between their junior and senior years of college, advanced course cadets attend a paid four-week training session called the Leader Development Assessment Course (LDAC) at Fort Lewis, Washington. LDAC provides cadets the chance to practice what they've learned in the classroom and introduces them to Army life in a field environment.

Students may utilize up to the maximum number of credits in the core curriculum received through completions of Military Science (ROTC) classes as free electives which are credited towards graduation. All credits are computed into QPA and overall credits completed.

## **The Two-Year Program**

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

To enter the Two-Year program, students must first attend the paid four-week Leader's Training Course, held during the summer between their 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 the necessary enrollment requirements are enrolled in the advanced course.

## **Leaders Training Course (LTC) Practicum**

The Military Science Leadership Practicum is a paid, four-week course conducted at Fort Knox, Kentucky, during the summer. It is designed primarily for junior and community college graduates entering Shippensburg University seeking hands-on experiences in the U.S. Army.

The practicum prepares students for 300-level military science courses, but there is no obligation to continue in military science for attending the practicum. Students who successfully complete the leadership practicum may continue on in the advanced ROTC program. Exceptional performance during this program may qualify the student for a scholarship. Participants receive room, board, travel expenses, medical care, and are paid approximately \$700 for the four-week period.

## **Leader Development Assessment Course (LDAC) Practicum**

The four-week summer training program, conducted at Fort Lewis, Washington, stresses the application of military skills to rapidly changing situations. Participants are evaluated on their ability to make sound decisions, to direct team efforts toward the accomplishment of common goals, and to meet mental and physical challenges. Completion of this practicum is required prior to commissioning and is normally attended between the junior and senior years. Participants receive room, board, travel expenses, medical care, and are paid approximately \$700 for the four-week period.

## **Military Science Career Possibilities**

Individuals who complete the ROTC program earn a commission as a Second Lieutenant upon graduation and serve in the active Army or Reserve components.

In addition to the core requirements, cadets must complete a course in military history. Students are also encouraged to better enhance their education in courses such as anthropology, written communication, human behavior, management, and international studies.

### **Minor**

## **Military Science Minor**

The Military Science Minor enhances students' individual leadership skills and prepares them for future leadership opportunities across a broad range of disciplines. This minor can be complete by all students at the University, whether they choose to serve in the military or not. Outcomes and objectives of the Minor Program center around Leadership, the Army Profession, Professional Competence, Adaptability, Teamwork, Lifelong Learning, and Comprehensive Fitness.

For the students that take four years of Military Science, the minor codifies the coursework they are already completing. For the student that does not desire to serve in the Army, the minor is flexible enough to allow students to choose interdisciplinary coursework while still achieving the minor's outcomes and objectives. This path allows the student to pursue a diverse program that incorporates military history, ethics, public administration, and the use of the military as an instrument of national power. While the Military Science classes are taught through a military lens, the components of adaptability, teamwork, comprehensive fitness, leadership, and critical thinking are interdisciplinary and applicable regardless of a student's chosen future career path.

All students that graduate the four-year ROTC program will receive commissions into the United States Army as second lieutenants. Clearly the program benefits these students through their military career. Students that choose to take the minor but not the commission into the Army not only learn similar skills, but codify for future employers their academic endeavors that relate to a plethora of state and federal agencies.

**18-20 (crs.)**

### **Required Courses (8 crs.)**

- MIL 131 - Military Science I (2 crs.) Credits: 2
- MIL 132 - Military Science I Credits: 2
- MIL 231 - Military Science II Credits: 2
- MIL 232 - Military Science II Credits: 2

**Electives (Select One) (2-3 crs.)**

- MIL 331 - Military Science III Credits: 2 \*
- MIL 332 - Military Science III Credits: 2 \*
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3

### Electives (Select One): (3 crs.)

- HIS 345 - Military History of the United States Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- MIL 350 - Military Science IV Credits: 3 \*
- MIL 351 - Military Science IV Credits: 3 \*
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 371 - Public Management Credits: 3

### Electives (Select Two) (5-6 crs.)

Remaining credits can be selected from any of the above required courses not fulfilling a prior area.

- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- MIL 331 - Military Science III Credits: 2 \*
- MIL 332 - Military Science III Credits: 2 \*
- MIL 350 - Military Science IV Credits: 3 \*
- MIL 351 - Military Science IV Credits: 3 \*
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 371 - Public Management Credits: 3

### Note:

\* Students that do not intend to contract with the US Army may only take these courses with Departmental Approval.

Two elective courses, for a total of 6 credits, must be at the 300 or 400 level.

## Other Degrees

## ROTC Program

## Program Requirements

### Basic Program

- MIL 131 - Military Science I (2 crs.) Credits: 2

- MIL 132 - Military Science I Credits: 2
- MIL 231 - Military Science II Credits: 2
- MIL 232 - Military Science II Credits: 2  
or
- Prior Military Service up to 4 or more crs  
or
- Leaders Training Course

## Advanced Program

- MIL 331 - Military Science III Credits: 2
- MIL 332 - Military Science III Credits: 2
- Leadership Development and Assessment Course
- MIL 350 - Military Science IV Credits: 3
- MIL 351 - Military Science IV Credits: 3

## Additional Advanced Course Requirements

In addition to the core requirements, cadets must complete a course in military history. Students are also encouraged to better enhance their education in courses such as anthropology, written communication, human behavior, management, and international studies.

## Social Work/Gerontology Department

The social work program prepares students for professional entry-level social work practice. Accredited by the Council on Social Work Education (CSWE), the curriculum builds on a firm liberal arts foundation to develop a broad-based approach for understanding and working with people in a variety of ways.

Social work is a dynamic profession that strives to respond to human needs in an ever-changing world. The profession can be characterized by its diversity-diversity of clientele, diversity of knowledge and skill base, diversity of career opportunities, and diversity as a value base for respect of people's differences. The professional value base of empowerment, access to opportunity, and social justice is evident throughout the program objectives.

Students interested in pursuing a social work major should consult with the BSW Program Director and declare the major as soon as possible. There are two levels of admission into the major. The first is a pre-professional standing. The second level is a professional standing and will only be granted after students successfully complete a formal admission process.

Professional standing will require a minimum overall quality point average of 2.50 and 40 hours of volunteer service. Admission procedures are fully described in the social work student handbook.

The program is organized by competencies that are integrated throughout the curriculum. Whereas the liberal arts foundation sets the stage for critical thinking and the abilities to draw knowledge about the human condition from a wide variety of disciplines, the social work-specific curriculum builds upon the foundation in a sequence of courses designed to prepare the entry-level social worker for practice. Social work courses blend theoretical and practical components throughout the plan of study. In the senior year, students have a field practicum (agency-based) which is coordinated by a faculty person. This capstone experience is designed to integrate theory and practice with agency-based instruction and a concurrent seminar course.

During the educational experience as a social work major, a student can expect to develop a professional identity based on the values and ethics of the profession. Themes of development throughout the program are: self awareness, interactional skill competencies, critical thinking abilities using problem-solving theory, understanding of human behavior from a system/ecological framework, appreciation of diversity, commitment to social justice, and the generalist competencies to work across systems, i.e., individuals, families, groups, organizations, and communities.

## **Bachelor of Social Work**

### **Social Work, B.S.W.**

The baccalaureate social work degree is the first level of professional education for entry into the social work profession. Thus, the goal of our social work program is to build on the liberal arts perspective and integrate the knowledge, values, and skills for competent generalist entry-level practice. The program curriculum is designed around core competencies and practice behaviors.

The program operates as a community. We have a student resource room and student organizations which provide a wide variety of extracurricular opportunities. For example: volunteer work, programs about practice opportunities, social activities, trips to state and national conferences, and networking.

## **Academic Advisement**

Students are encouraged to work with their advisors throughout their educational process. The faculty offer extended advising and support. Regular review of students' progress is completed by the faculty during the professional development review which is conducted each semester.

## **Career Opportunities**

Upon graduation, an entry-level generalist social worker will possess the professional judgment and proficiency to apply differentially, with supervision, the common professional foundation to serve people in systems of various sizes and types. Social work offers many career opportunities in diverse fields such as health, child welfare and domestic violence, aging, developmental disabilities, substance abuse, and behavioral health to name a few. A graduate will have special skills for delivering services to clients, which include the development and provision of resources on client's behalf through organizational and community work. The graduate will be prepared with a breadth and depth of analytical and interactional skills for beginning work with individuals, families, groups, organizations, and communities. The program's objective is to prepare students in these learning areas at a level that maintains accreditation by the Council on Social Work Education (CSWE) and is evaluated by employers and graduate programs as an excellent foundation for both entry-level practice and future career development. This task requires a program and curriculum designed to enable each student to develop the values, knowledge and self-awareness skills as reflected in our stated educational competencies.

## **Required Courses (55 crs.)**

*\* Students must earn a C or higher in Social Work courses in order for them to count as prerequisites and towards program completion. All courses are 3 credits unless otherwise specified.*

- SWK 102 - Social Work in Social Welfare Credits: 3
- SWK 150 - Human Relations Lab Credits: 3

- SWK 250 - Assessing Individuals in the Social Environment Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 270 - Social Work Practice with Individuals Credits: 3
- SWK 375 - Social Work Skills for Working with Groups Credits: 3
- SWK 327 - Social Work Practice with Families Credits: 3
- SWK 340 - Assessing Organizations and Communities in Society Credits: 3
- SWK 360 - Research Techniques for Social Workers Credits: 3
- SWK 370 - Social Work Practice with Organizations and Communities Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3
- SWK 388 - Preparation for Practicum Credits: 1
- SWK 462 - Seminar in Social Work Methods Credits: 3 \*\*
- SWK 460 - Field Work in Social Work I Credits: 6 \*\*
- SWK 461 - Field Work in Social Work II Credits: 6 \*\*

### Note:

*\*Note: During this course students must apply for professional standing, students who transfer in this course must apply during their first semester. These procedures and criteria are described in the student handbook.*

*\*\*Note: Field work in social work and the Seminar in Social Work Methods are taken for 15 credit hours with no additional course work during the last semester in the senior year. Students must have earned a C or better in all required social work courses and full faculty approval before they are eligible for field work and Seminar in Social Work Methods.*

## Social Work Electives (3 crs.)

One of the following courses is required:

- SWK 262 - Social Work Elective: Introduction to Child Welfare Practice Credits: 3
- SWK 347 - Special Fields of Social Work: Behavioral Health Credits: 3
- SWK 348 - Special Fields of Social Work: Substance Abuse Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 357 - Special Fields of Social Work: Health Care Credits: 3
- SWK 358 - Special Fields of Social Work: Schools Credits: 3
- SWK 359 - Social Work Elective: Violence in Interpersonal Relationships Credits: 3
- SWK 383 - Selected Topics in Social Welfare Credits: 1-3
- SWK 490 - Selected Topics in Social Welfare Credits: 1-3

## Allied Fields (15-16 crs.)

Students majoring in social work must take the following courses in allied fields which may also meet general education requirements.

- PSY 101 - General Psychology Credits: 3
- BIO 150 - Human Biology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3



- PLS 100 - U.S. Government and Politics Credits: 3
- MAT 117 - Applied Statistics Credits: 3

## Minor

### Gerontology Minor

Gerontology is the interdisciplinary study of the aging process, older adults, and issues important to those in later life. Our undergraduate gerontology minor is designed to provide you with the necessary knowledge, skills, and abilities to better serve our rapidly growing older population. Through required course work, electives in your personal area of interest, applied experiences, research opportunities and volunteer activities, you will gain a firm understanding of aging-related issues that can be applied to your major field of study.

Because our older adult population is growing at an astounding rate, it is highly likely you will encounter older people, regardless of your chosen profession. For example, those interested in working with older adults (e.g., psychologists, social workers, physicians, health services professionals), those who want to design products that can be useful to older people (e.g., financial planners, computer software/hardware engineers) or those who are concerned about issues that impact later adulthood (e.g., lawyers, political scientists, sociologists) should all consider enrolling in the gerontology minor. Knowledge about aging can make you a better professional and will signal employers you have what it takes to better serve the needs and interests of this group.

18 crs.

#### Core Requirements (6 crs.)

To gain a foundation in aging knowledge and service, all students are required to complete the following courses:

- GRN 100 - Introduction to Gerontology Credits: 3
- GRN 301 - Gerontology Internship Credits: 3

#### Approved Electives (12 crs.)

To fulfill the remainder of the minor requirements, students are encouraged to take elective courses that match their personal and professional areas of interest. These include:

- COM 245 - Diversity and the Media Credits: 3
- DS 100 - Introduction to Disability Studies Credits: 3
- ECO 317 - Health Economics Credits: 3
- ESC 200 - Lifestyle Management Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3
- GRN 303 - Gerontology Internship II Credits: 3
- GRN 391 - Selected Topics in Gerontology Credits: 1-3
- GRN 491 - Advanced Selected Topics in Gerontology Credits: 1-3
- PSY 352 - Adulthood and Aging Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 435 - Psychopharmacology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3

- SOC 320 - Sociology of Disability Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 369 - Medical Sociology Credits: 3
- SOC 371 - Social Dynamics of Aging Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 357 - Special Fields of Social Work: Health Care Credits: 3
- SWK 383 - Selected Topics in Social Welfare Credits: 1-3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3

## Note:

Selected Topics with an aging theme or significant aging content from any department may count towards the gerontology minor. Contact the director for approval.

ESC 352 has a prerequisite of PSY 101 and ESC 250

GRN 391 may be repeated.

## Teacher Education Department

Each of the teacher education curriculums at Shippensburg is a four year program requiring at least 120 credit hours leading to the degree of Bachelor of Science in Education for either Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8. There is also the option to enroll in a Special Education PK-4 Dual option which leads to certification in both ECH Elementary PK-4 Education and Special Education. Successful completion of one of these programs of study qualifies the graduate for a variety of professional employment possibilities. The basic program qualifies the student to apply for a teaching certificate, making the graduate eligible for employment at either the Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8 levels. Students who choose the Elementary/Middle Level Education: Grades 4-8 program will choose either a single or double area in which they will be certified to teach. A certification to teach environmental education (K-12) is given to those students completing the environmental education concentration. Some certification options may require more than 120 credits as well as have prerequisite courses that may need to be completed.

Students experience a standards-based curriculum that provides them with the knowledge, skills and dispositions to become reflective educators. Underlying all of their course work is a common theme that centers upon applying research, best practice, the integration of technology, and ongoing assessment to make informed decisions about the ways to best meet the individualized needs of their students. Effective communication skills, the ability to collaborate with others, active learning, a respect for diversity, and professionalism are the hallmarks of their classwork and field experiences.

Students share in the broad programs of general education provided for all students at the university, including courses in the humanities, natural sciences, and social sciences.

## Admission Requirements

Students admitted to either the Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8 education programs are expected to maintain an adjusted quality point average of at least a 3.0. In

conjunction with the approved QPA, the department requires that a grade of C or higher must be obtained in each course listed on the approved planning sheet.

Faculty periodically review students' social and academic progress and make recommendations for appropriate supportive actions if needed.

To be admitted into Professional Standing, a student must have attained or exceeded the cut scores on the approved basic skills test (PAPA - Pre-service Academic Performance Assessment). The cost of the testing program is paid by the individual student. In addition, the student must have met the approved writing competencies, achieved a minimum of a C grade in all courses required by the department, and achieved an overall quality point average of at least 3.0. All courses listed on the program planning sheet are the courses required by the department.

A student transferring into the program from another program on campus must have a 3.0 quality point average. A student transferring into the program from another institution of higher education must have a 3.0 quality point average. Please note that some programs have limited availability due to course offerings. Student applications will be evaluated and ranked for consideration. It is possible that even if a student meets the requirements, they may not be able to enter a desired program due to limited space.

## **Bachelor of Science in Education**

### **Early Childhood/Elementary Education: PK-4, B.S.Ed.**

Minimum of 120 credit hours required

#### **Required Courses**

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3  
OR
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- MAT 110 - Fundamentals of Mathematics I Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3
- PSY 101 - General Psychology Credits: 3

#### **Choose one:**

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

#### **Biology (3 crs.)**

Choose one:

- BIO 100 - Basic Biology Credits: 3

- BIO 142 - Introduction to Ecology Credits: 3
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3

## Physical Sciences (3 crs.)

Choose one:

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1 and
- PHY 121 - Introductory Physics I - Lecture Credits: 3  
or
- PHY 205 - Intermediate Physics I Credits: 3
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- CHM 121 - Chemical Bonding Credits: 3

## Earth Sciences (3 crs.)

Choose one:

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3
- BIO 145 - Environmental Biology Credits: 3

### \*Note:

One course in either biology, physical sciences, or earth sciences must be a lab course. BIO 142, BIO 162 , BIO 208, BIO 242, CHM 105, ESS 110, ESS 111, ESS 210, PHY 121, PHY 205.

## Fine Arts (6 crs.)

(Choose 2 from different disciplines)

### Discipline 1

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

## Discipline 2

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3
- THE 121 - Introduction to the Theatre Credits: 3

## Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

### Discipline 1

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

### Discipline 2

- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Literature Elective (3 crs.)

Choose one:

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

## Professional Core (60 crs.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 220 - Developmental Science: Physical, Motor, & Health Credits: 3
- ECH 260 - Developmental Science: Cognitive & Language Credits: 3
- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3
- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 343 - Mathematics Methods I for PreKindergarten & Kindergarten Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- ECH 480 - Early Childhood Professional Seminar Credits: 3

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3
- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4

## Student Teaching Semester

- ECH 489 - Early Childhood Student Teaching Credits: 1-12

## **Early Childhood/Elementary Education: PK-4, Early Childhood Concentration B.S.Ed.**

### Required Courses

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3

### Categories of Knowledge

#### Category A - Rational Thinking (3 crs.)

- MAT 110 - Fundamentals of Mathematics I Credits: 3

#### Category B - Literary Artistic and Cultural Traditionals (9 crs.)

##### Literature (Select one)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3
- Foreign Literature, with advisement

##### Fine Arts (6 crs.)

(Choose 2 from different disciplines)

Art

(ART 101 recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Music (3 crs.)

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Theatre (3 crs.)

- THE 121 - Introduction to the Theatre Credits: 3

## Category C - Laboratory Science (9 crs.)

Select one course from each of the 3 categories. **One** of the 3 courses must have a laboratory component indicated with an asterisk (\*).

### Biology (3 crs.)

- BIO 100 - Basic Biology Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3 \*
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4 \*
- BIO 208 - Field Biology Credits: 3 \*
- BIO 242 - Ecology Credits: 3 \*

### Earth Science (3 crs.)

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 \*
- ESS 111 - Introduction to the Atmosphere Credits: 3 \*
- ESS 210 - Physical Geology Credits: 3 \*
- BIO 145 - Environmental Biology Credits: 3

### Physical Sciences (3 crs.)

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3  
and

- PHY 123 - Physics I Laboratory Credits: 1 \*
- PHY 205 - Intermediate Physics I Credits: 3 \*
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3 \*
- CHM 121 - Chemical Bonding Credits: 3

## Category D - Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Category E - Social & Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Choose One of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Professional Core (60 crs.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 220 - Developmental Science: Physical, Motor, & Health Credits: 3
- ECH 260 - Developmental Science: Cognitive & Language Credits: 3
- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3
- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 343 - Mathematics Methods I for PreKindergarten & Kindergarten Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3



- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4
- ECH 340 - Preschool and Kindergarten Curriculum Credits: 3
- ECH 410 - Physical, Motor, and Sensory Development in Early Childhood Credits: 3
- ECH 462 - Practicum in Early Childhood Concentration with Administrative Field Experiences Credits: 3
- ECH 470 - Language Development, Literacy, and Play in Early Childhood Education Credits: 3

### Electives (Select One):

- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3

## **Elementary/Middle Level Education: Grades 4-8, English/Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

### **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

### Concentration Area

#### Language Arts (30 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
- ENG 190 - General Education Special Topics Credits: 3 or

- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- TCH 303 - Books and Materials for Children Credits: 3

**Note:**

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Cognate Areas

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

**Note:**

BIO 100, CHM 105, ESS 110 meet general education requirements

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

## Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

## Fine Arts (6 crs.) (Select two from different disciplines)

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

## Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

## Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

## Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

## Note:

PSY 101 meets general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (42 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (15 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Math and Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## **Concentration Areas**

### **Mathematics (20 crs.)**

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

### **English/Language Arts (21 crs.)**

- ENG 190 - General Education Special Topics Credits: 3 or
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
  
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3

- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3

**Note:**

ENG 190, ENG 248, ENG 250, ENG 114 , ENG 115 meet general education requirements

## Cognate Areas

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

**Note:**

BIO 100, CHM 105, ESS 110 meet general education requirements

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

**Note:**

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

### Writing/Fluency Competencies (3 crs.)

- HCS 100 - Introduction to Human Communication Credits: 3

**Note:**

HCS 100 meet general education requirements

### Fine Arts (6 crs.)

**(Select two from different disciplines)**

## Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

## Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meets general education requirements

Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3
- TCH 342 - Teaching Middle Level Mathematics Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Math and Science Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**



Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

### Mathematics (20 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

### Note:

MAT 110 , MAT 111 meet general education requirements

### Science (22-23 crs.)

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

## Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

## Cognate Areas

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

## Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

## Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

### Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

## Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

### Fine Arts (6 crs.)

**(Select two from different disciplines)**

## Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 399 - Independent Study Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

## Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

### Note:

PSY 101 meets general education requirements

### Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- TCH 342 - Teaching Middle Level Mathematics Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Math and Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

### Mathematics (20 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

### Note:

MAT 110, MAT 111 meet general education requirements

### Social Studies (21 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3

- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- ECO 345 - The Economics of Growth and Development Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

Note:

GEO 101, ECO 101, HIS 105, HIS 106 meet general education requirements

## Cognate Areas

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

Note:

BIO 100, ESS 110 meet general education requirements

### Language Arts (12 crs.)

- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3

Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Literature

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

## Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

## Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

## Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

## Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

## Note:

PSY 101 meet general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- TCH 342 - Teaching Middle Level Mathematics Credits: 3
- TCH 348 - Teaching Middle Level Social Studies Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15



# **Elementary/Middle Level Education: Grades 4-8, Mathematics Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## **Concentration Area**

### **Mathematics (30 crs.)**

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

Choose Two of the Following:

- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 326 - Mathematical Modeling Credits: 3
- MAT 400 - History of Mathematics Credits: 3

## **Cognate Areas**

## Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

## Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
  
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

### Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

## Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

### Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

## Fine Arts (6 crs.)

(Select two from different disciplines)

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

### Note:

PSY 101 meets general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 342 - Teaching Middle Level Mathematics Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Science and English/Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## **Concentration Areas**

### **Science (22-23 crs.)**

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3 and
- PHY 123 - Physics I Laboratory Credits: 1
  
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

**Note:**

BIO 100, CHM 105, ESS 110 meet general education requirements

## English/Language Arts (21 crs.)

- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
  
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
  
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3

### Note:

ENG 190 , ENG 248 ENG 250 , ENG 114 , ENG 115 meet general education requirements

## Cognate Areas

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
  
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

### Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Note:

MAT 110 , MAT 111 meet general education requirements.

## Writing/Fluency Competencies (3 crs.)

- HCS 100 - Introduction to Human Communication Credits: 3

### Note:

HCS 100 meets general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Note:

MUS 110, MUS 121, MUS 261 meets general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

#### Note:

PSY 101 meets general education requirements

#### Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

#### Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3



## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Science and Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

### **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

### Science (22-23 crs.)

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

## Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

## Social Studies (21 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- ECO 345 - The Economics of Growth and Development Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

## Note:

ECO 101 , GEO 101 , HIS 105 , HIS 106 meet general education requirements

## Cognate Areas

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

## Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

## Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

### Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meet general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- TCH 348 - Teaching Middle Level Social Studies Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# Elementary/Middle Level Education: Grades 4-8, Science Concentration, B.S.Ed.

(Minimum of 120 credit hours required)

## Option 1: Single Certification

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Science (31 crs.)

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3 or
- BIO 242 - Ecology Credits: 3
- CHM 105 - An Observational Approach Credits: 3

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1  
or
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- ESS 210 - Physical Geology Credits: 3 or
- ESS 220 - Oceanography Credits: 3 or
- ESS 355 - Meteorology Credits: 3 or
- ESS 404 - Applied Meteorology and Climatology Credits: 3

### Note:

BIO 161, CHM 105, ESS 110, meet general education requirements

## Cognate Areas

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
  
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

### Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or

- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

**Note:**

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Additional Coursework

### Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

**Note:**

ENG 243, ENG 248, ENG 250 meet general education requirements

### Fine Arts (6 crs.)

(Select two from different disciplines)

#### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

**Note:**

MUS 110, MUS 121, MUS 261 meet general education requirements

#### Art

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

ART 101 is recommended

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

### Note:

PSY 101 meets general education requirements

### Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

### Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3



## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

### **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Area

## Social Studies (33 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- GEO 101 - World Geography Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

Choose One:

- HIS 301 - The West in American History Credits: 3
- HIS 302 - American Business History Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 305 - The Civil War Era Credits: 3
- HIS 309 - History of the American Worker Credits: 3
- HIS 314 - History of Jacksonian America Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 338 - Colonial America Credits: 3
- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 402 - Revolutionary America Credits: 3
- HIS 413 - Pennsylvania History Credits: 3

Choose One:

- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

### Note:

ECO 101, GEO 101, GEO 140, HIS 105, HIS 106 meet general education requirements

## Cognate Areas

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

#### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

#### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

### Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

#### Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

### Fine Arts (6 crs.)

**(Select two from different disciplines)**

## Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

## Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (3 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

## Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

## Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

## Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 348 - Teaching Middle Level Social Studies Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Special Education and Early Childhood Education, B.S.Ed.**

### Required Courses (15 cr.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

## Categories of Knowledge

### Category A - Rational Thinking

- MAT 110 - Fundamentals of Mathematics I Credits: 3

## Category B - Literary Artistic and Cultural Traditionals (9 crs.)

### Literature (Select one)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

### Fine Arts (6 crs.)

Choose 2 from different disciplines

#### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

#### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

#### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

## Category C - Laboratory Science (9 crs.)

Select one course from each of the 3 categories. One of the 3 courses must have a laboratory component indicated with an asterisk (\*).

### Biology

- BIO 100 - Basic Biology Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3 \*
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4 \*
- BIO 208 - Field Biology Credits: 3 \*
- BIO 242 - Ecology Credits: 3 \*

## Earth Science

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 \*
- ESS 111 - Introduction to the Atmosphere Credits: 3 \*
- ESS 210 - Physical Geology Credits: 3 \*
- BIO 145 - Environmental Biology Credits: 3

## Physical Sciences

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3  
and
- PHY 123 - Physics I Laboratory Credits: 1 \*
  
- PHY 205 - Intermediate Physics I Credits: 3 \*
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3 \*
- CHM 121 - Chemical Bonding Credits: 3

## Category D - Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Category E - Social & Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Choose One of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Professional Core (75 cr.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 280 - Physical, Language and Cognitive Development Credits: 3
- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3

- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- ECH 480 - Early Childhood Professional Seminar Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 280 - Best Practices in Collaboration: Educators, Families, & Related Service Providers Credits: 3
- EEC 320 - Interventions for Students with Communication Impairments Credits: 3
- EEC 325 - Interventions for Students with Social/Emotional and Behavioral Impairments Credits: 3
- EEC 330 - Teaching Students with Exceptionalities in a Standards-Aligned System Credits: 3
- EEC 335 - Interventions for Students with Cognitive and/or Physical Impairments Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3
- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4

## Early Childhood/Special Education Student Teaching (12 crs.)

- ECS 489 - Student Teaching and Professional Practicum Credits: 12

## Minor

### Reading Minor

18 (crs.)

- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 330 - Content Area Reading in the Primary Grades Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- RDG 345 - Teaching Language Arts in PreK-4 Classroom Credits: 3
- RDG 350 - Text Accessibility and Comprehension in the PK-4 Classroom Credits: 3

## Certification

### Environmental Education Certification



Shippensburg University offers an approved program in environmental education. The program may be taken by Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8 as an academic sequence or by secondary education majors in biology or geography/earth science. Secondary students in other fields may enroll in the program with the permission of their department chair.

The environmental education program at Shippensburg is a somewhat structured program, but it also allows for much diversity in the selection of courses for the completion of the requirements for the certification. This certification allows the teacher to teach any subject matter which is labeled as environmental education in any grade from kindergarten through the 12th grade.

To receive the certification a student must complete a minimum of 24 credits from the courses described below. The only course which is required of all students is EDU 410 - Environmental Education Practicum Credits: 3.

The practicum is offered during fall semester of odd numbered years and summers during even numbered years.

The additional 21 credits may be selected in a variety of ways, but a minimum of 12 credits must be selected from a core of courses and nine credits must be selected from courses outside of the student's major field of study. These 21 credits must also be selected from a minimum of three departments of the university and include a statistics course.

**24 crs.**

## Required Course

- EDU 410 - Environmental Education Practicum Credits: 3

## Core Courses - 12 crs. minimum

The student must select a minimum of one course from each of the four categories (A-D) below. Additional courses may be counted toward Related Electives.

### Category A.

- BIO 142 - Introduction to Ecology Credits: 3
- BIO 242 - Ecology Credits: 3

### Category B.

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Category C.

- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3

### Category D.

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3

## Related Electives

Any remaining credits must be selected from the courses listed below. It is recommended students take as broad a base of courses as possible if they have a strength in one of the science areas. If an area of strength is not evident, it is recommended the remaining electives be used to establish one.

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
- BIO 205 - Marine Biology Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 245 - Marine Ecology Credits: 3
- BIO 362 - Invertebrate Zoology Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- ECO 310 - Public Finance Credits: 3
- ECO 340 - Introduction to Regional Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 371 - Public Management Credits: 3
- MAT 117 - Applied Statistics Credits: 3

### Note:

BIO 205, BIO 245, and BIO 446 are offered at the Marine Science Consortium, Wallops Island, Virginia.

A student should normally indicate interest in receiving the certification early in his/her undergraduate studies. This interest should be communicated to his/her advisor or department chair so a suitable program can be planned which will allow the student to complete the requirements within a normal four-year program. Students and advisors are urged to consult the catalog for any prerequisites for courses above the 100 levels.

## Academic Programs and Services

# Academic Success Program

## Programs of Study

### Major

#### Accounting, B.S.B.A.

The goal of the accounting program is to provide students with the knowledge and skills expected of accountants today for the accomplishment of successful and rewarding careers.

In order to achieve this goal, students are exposed to both theoretical and practical accounting material with appropriate emphasis being given to logical reasoning and communication (written and oral) skills and the study of information systems and international practices.

The undergraduate program for a B.S.B.A. degree in accounting requires the completion of a minimum of 120 semester hours, which includes the satisfactory completion of the following six required courses and one accounting elective:

#### B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

#### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

#### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (18 crs.)

- ACC 306 - Tax Accounting Credits: 3
- ACC 310 - Intermediate Accounting I Credits: 3
- ACC 311 - Intermediate Accounting II Credits: 3
- ACC 312 - Cost Determination and Analysis Credits: 3
- ACC 404 - Auditing Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3  
*Students who double major in ACC and MIS take MIS 355 instead of MIS 300*

### Accounting Electives (3 crs.)

(One course from the following 3-credit courses)

- ACC 401 - Advanced Accounting Credits: 3
- ACC 406 - Advanced Tax Accounting Credits: 3
- ACC 412 - Advanced Cost Analysis and Control Credits: 3
- ACC 490 - Selected Topics in Accounting Credits: 3

### Note:

A student graduating with a major in accounting must be proficient in the use of microcomputers to function effectively in the accounting profession. In order to develop the proficiency expected of an accounting graduate, assignments will be given throughout the accounting program which require the use of a microcomputer. By the middle of the sophomore year a student majoring in accounting will be expected to have acquired a personal computer which is compatible with the hardware and software used by the Department of Accounting. Our computer labs, though well-equipped, are utilized by all college of business students. Due to this high demand, a personal computer is invaluable in fulfilling accounting major course requirements.

## Accounting Career Opportunities

The accounting program is designed to prepare students for national and international careers in professional, industrial, and non-profit accounting. The Accounting Department is cognizant of developments in the academic and professional accounting areas to ensure the curricula and teaching methods are of the highest standards.

## Accounting B.S.B.A./M.B.A. Five-Year Program

An accelerated B.S.B.A./M.B.A. program is proposed for students who are qualified on the basis of scholastic aptitude, academic performance, and accounting-related work experience. Students who qualify for the program may earn both the bachelor's and master's of Business Administration within a total period of ten semesters and two summer sessions. Students would be admitted provisionally at beginning of their fourth year upon meeting the admission requirements.

## Applied Physics, B.S.

The Applied Physics program is pursued by roughly half of the physics majors. It results in a dual Physics-Engineering degree, and it is controlled by 3+2 agreements between the Shippensburg Physics Department and several engineering schools. According to these agreements, students spend three years at Shippensburg University's Physics Department, completing 98 credits, and then proceed to complete their studies in two years at one of the participating engineering programs (most notably Penn State University or here at Shippensburg). After successfully completing the program students earn both an Applied Physics B.S. from Shippensburg and a B.S. in engineering from the school they transferred to (or a double major at Shippensburg). The Shippensburg physics credits consist of the Physics Core, required courses in allied fields (chemistry, computer science and mathematics) as well as general education courses.

The 3+2 program, fairly common in physics departments across the nation offer several advantages:

- By virtue of the agreement a student in a 3+2 program is guaranteed admission with junior standing into the engineering school chosen, provided that this student maintains, while at Shippensburg, a specified QPA which varies with engineering schools and disciplines. We notice, however, that engineering schools can occasionally put restrictions on the availability of seats, due to enrollment restrictions in some of their engineering disciplines.
- Due to their solid scientific background, students typically do very well after transferring to their engineering discipline.
- Students profit for three years of the small class size and careful faculty guidance that Shippensburg is known for.

## Degree Requirements (98 crs.):

Students in the Applied Physics program must complete their Shippensburg requirements in three years. These consist of the following courses:

### General Education requirements (36 crs.)

### The Physics Core (55 crs.)

### Additional courses (7 crs.)

- MAT 318 - Elementary Linear Algebra Credits: 3

- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

**Note:**

See note at the end of the Core Courses description

## Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

**Note:**

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## **Art, B.A.**

## Requirements for the Art Major - 39 crs.

The art major program for a B.A. in art consists of basic core courses plus a selected concentration, which may be fine arts, history, or studio. Please note that some courses are only offered in the fall or spring. Students should plan their schedules accordingly and with care. All art majors are required to take the following courses:

### Foundation Courses (12 crs.)

(Taken during first year of program)

- ART 101 - Art Appreciation Credits: 3
- ART 110 - Basic Drawing Credits: 3
- ART 215 - Color and Two-Dimensional Design Credits: 3 offered in fall only
- ART 218 - Three-Dimensional Design Credits: 3 offered in spring only

### Additional Foundation Courses (12 crs.)

- ART 210 - Drawing II Credits: 3
- ART 232 - Art History II Credits: 3 offered in fall only
- ART 233 - Art History III Credits: 3 offered in spring only
- ART 385 - Senior Art Seminar Credits: 3 (One year sequential course which begins in the fall; students may not enter mid-year.)

### Art Electives (15 crs.)

All art majors also must elect five courses (15 crs.) or six courses (18 crs.) if ART 101, ART 232, or ART 233 is taken as a general education elective in Category B of the General Elective credits required by Shippensburg University. Not all courses are offered every semester. Students should check with their advisor to learn the sequence of courses and the general education courses required for their major as they develop their four-year plan. Four of the six electives must be 300 level or higher. Courses are selected from the following list:

- ART 211 - Figure Drawing Credits: 3 offered in 'even' year fall only
- ART 217 - Computer Design I Credits: 3
- ART 231 - Art History I Credits: 3 offered in 'even' year fall only
- ART 300 - Independent Studio/Ceramics Credits: 3
- ART 301 - Independent Studio/Drawing Credits: 3
- ART 302 - Independent Studio/Enameling Credits: 3
- ART 303 - Independent Studio/Painting Credits: 3
- ART 304 - Independent Studio/Sculpture Credits: 3
- ART 305 - Independent Studio /Computer Design Credits: 3
- ART 306 - Computer Design II Credits: 3 offered in spring only
- ART 309 - Independent Studio Credits: 3
- ART 319 - Computer Design III Credits: 3 offered in spring only
- ART 321 - Watercolor I Credits: 3 offered in spring only
- ART 322 - Watercolor II Credits: 3 offered in fall only
- ART 326 - Painting I Credits: 3 offered in fall only
- ART 327 - Painting II Credits: 3 offered in spring only
- ART 337 - Printmaking I Credits: 3

- ART 339 - History of American Art Credits: 3 offered in 'even' year fall only
- ART 340 - Ceramics Credits: 3 offered in fall only
- ART 341 - Advanced Ceramics Credits: 3 offered in spring only
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 offered in fall only
- ART 393 - Selected Topics in Art Credits: 1-3
- ART 395 - Internship in Art I Credits: 3
- ART 399 - Independent Study Credits: 3
- ART 400 - Contemporary Methods in Art Education Credits: 3
- ART 425 - Computer Design IV Credits: 3 offered in spring only
- ART 430 - Computer Design V Credits: 3
- ART 435 - Computer Design VI Credits: 3 offered in spring only
- ART 490 - Selected Topics in Art Credits: 1-3

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

## **Art Education Certification, B.A.**

In addition to the 24 credits of foundation courses listed under the Art (B.A.), the following are required courses for the Art Education Certification program, including the College of Education and Human Services required courses for Pennsylvania Certification, K-12.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Required Art Courses

- ART 217 - Computer Design I Credits: 3
- ART 326 - Painting I Credits: 3 offered in fall only
- ART 340 - Ceramics Credits: 3
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 offered in fall only
- ART 400 - Contemporary Methods in Art Education Credits: 3

## Required General Education Courses

Students are required to complete the following courses as part of their general education requirements:

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3



- GEO 103 - Geography of the United States and Canada Credits: 3
- PSY 101 - General Psychology Credits: 3
- Students must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ).

## Required College of Education and Human Services courses

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15  
(*Students in the K-12 Art Certification program will take 12 crs. of EDU 495* )

### Note:

Students must also take the Praxis I and II Examinations and complete all Pennsylvania Certification requirements to earn K-12 certification from the Pennsylvania Department of Education (PDE).

## Biology, B.S.

### Requirements

Students enrolled in a program of studies leading to the Bachelor of Science degree will fulfill the following requirements:

#### Biology Core Courses (13 crs.)

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

#### Upper Division Electives (13-14 crs.)

##### Ecology/Evolution Elective:

- BIO 242 - Ecology Credits: 3 or
- BIO 430 - Principles of Evolution Credits: 3

##### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or

- BIO 350 - Human Physiology Credits: 4

### Organismal Elective:

- BIO 230 - Botany Credits: 3 or
- BIO 317 - Parasitology Credits: 3 or
- BIO 362 - Invertebrate Zoology Credits: 3 or
- BIO 363 - Vertebrate Zoology Credits: 3

### Cellular Elective:

- BIO 220 - Microbiology Credits: 4 or
- BIO 385 - Cell Biology Credits: 3

### Additional Biology Electives (14-15 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

### Allied Fields (32 crs.)

#### Mathematics

MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4

#### Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

#### Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- Additional courses in biology, allied fields or other areas related to the major may be chosen with advisement

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## Biology, Biotechnology Concentration, B.S.

Biotechnology is a collection of techniques that uses living organisms or substances from those organisms for specific applications. Individuals with training in biotechnology can work in a variety of jobs in industrial, government, and academic settings. These careers may be in research, product development, production, quality control, technical writing, sales, education, or administration. Students in the biology program at Shippensburg University may choose the concentration in biotechnology. Students enrolled in this program will obtain a broad background in biology, chemistry, and physics as well as gain substantial biotechnology laboratory experience that includes the cloning and manipulation of DNA, immunochemical analyses, and cell culture. Students interested in pre-forensics should take 7-8 credits of suggested Criminal Justice courses.

Students in the biotechnology concentration must maintain at least a 2.5 QPA in their major and overall program through graduation. Students who are withdrawn from this concentration because their QPA has fallen below the minimum 2.5 may reapply when they reattain the minimum QPA.

### Biology Core Courses (25 crs.)

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 230 - Botany Credits: 3
- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 418 - Molecular Biology Credits: 3
- BIO 461 - Techniques in Biotechnology Credits: 3
- BIO 499 - Capstone Seminar in Biology Credits: 1

### Upper Division Electives (7 crs.)

#### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4

## Experiential Elective

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- or
- BIO 391 - Biology Internship I Credits: 1-3
- BIO 392 - Biology Internship II Credits: 1-3

## Additional Biology Electives (9 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

### Strongly Recommended Electives:

- BIO 220 - Microbiology Credits: 4
- BIO 324 - Pathogenic Microbiology Credits: 3
- BIO 371 - Human Anatomy Credits: 4
- BIO 408 - Principles of Virology Credits: 3
- BIO 409 - Immunology Credits: 3

## Allied Fields (38-39 crs.)

### Mathematics

MAT 221 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3
- OR
- MAT 217 - Statistics I Credits: 4
  
- MAT 211 - Calculus I Credits: 4

### Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

### Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1

- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- CHM 301 - Biochemistry I Credits: 3
  
- CHM 371 - Analytical Chemistry Credits: 4 or
- CHM 420 - Biochemistry II Credits: 3

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## Biology, Clinical Sciences Concentration, B.S.

The Clinical Sciences concentration enables students who are interested in Medical Technology, Histotechnology, Cytotechnology or Respiratory Therapy to include their clinical training as part of their B.S. in Biology degree requirements. Students in this concentration may enter a clinical program in medical technology (aka: medical laboratory science), histotechnology, cytotechnology, or respiratory therapy after their junior year of college and then transfer credits back to Shippensburg University following successful completion of their clinical education. An overall GPA of at least 2.5 is required to be eligible for this concentration and application to clinical sites is required one year in advance of the professional program starting date. Credits from the clinical year will be used to meet remaining elective requirements for Biology in addition to meeting "free electives" to complete the B.S. in Biology degree.

The clinical year may be taken at any of the hospital schools affiliated with Shippensburg University or any other hospital program accredited by the National Accrediting Agency for Clinical Laboratory Science. Although hospitals give preference to their affiliates, admission is on a competitive basis and Shippensburg University cannot guarantee admission to a hospital program for the clinical year.

The following is a list of current hospital affiliations for Shippensburg University (or non-affiliated but approved sites):

## Medical Technology

- Altoona Hospital, Augusta Health (Fishersville, VA)
- Conemaugh Memorial Medical Center (Johnstown, PA)
- Pennsylvania College of Health Sciences
- Reading Medical Center
- Rockingham Memorial Hospital (Harrisonburg, VA)
- Saint Vincent Health Center (Erie, PA)
- Williamsport Hospital Histotechnology
- York Hospital

## Histotechnology

- Conemaugh Memorial Medical Center (Johnstown, PA)

## Cytotechnology

- Thomas Jefferson University (Philadelphia, PA)
- Magee Women's Hospital (Pittsburgh, PA; non-affiliate)

## Respiratory Therapy

- Lancaster Regional Medical Center (via Millersville University)

## Biology Core Courses (24 crs.)

Students must earn at least a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 220 - Microbiology Credits: 4
- BIO 260 - Genetics Credits: 4
- BIO 350 - Human Physiology Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 300 - Careers in the Health Professions Credits: 1

## Additional Biology Electives

(Must take at least 7 additional Biology elective credits; see below). Specific electives to meet Clinical Sciences concentration requirements.

Please note only 3 credits of research may count as biology electives. Credits in excess of that number count as free electives.

## Medical Technology

### Required:

- BIO 324 - Pathogenic Microbiology Credits: 3
- BIO 374 - Hematology Credits: 2
- BIO 409 - Immunology Credits: 3

### Also recommended:

- BIO 317 - Parasitology Credits: 3
- BIO 418 - Molecular Biology Credits: 3

## Histotechnology

## Required:

- BIO 371 - Human Anatomy Credits: 4
- BIO 375 - Histology Credits: 3

## Cytotechnology

### Recommended:

- BIO 371 - Human Anatomy Credits: 4
- BIO 418 - Molecular Biology Credits: 3

## Respiratory Therapy

### Required:

- BIO 371 - Human Anatomy Credits: 4

### Also recommended:

- BIO 409 - Immunology Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3

## Allied Fields (32 crs.)

### Mathematics

Students unable to start at the level of MAT 211 Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

### Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

### Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
  
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology, Ecology and Environmental Biology Concentration, B.S.**

Students interested in ecological and environmental fields may choose the ecology and environmental biology concentration within the biology program. Students enrolled in this program will fulfill the following requirements:

### Biology Core Courses (19 crs.)

Students must earn at least a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

### Upper Division Electives (19-20 crs.)

#### Physiology Elective (4 crs.)

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4

#### Ecology and Conservation Electives (9 crs.)

Choose any 3:

- BIO 362 - Invertebrate Zoology Credits: 3



- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 406 - Mammalogy Credits: 3
- BIO 412 - Ichthyology Credits: 3
- BIO 417 - Herpetology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Cellular Elective (3-4 crs.)

- BIO 220 - Microbiology Credits: 4 or
- BIO 385 - Cell Biology Credits: 3

### Experiential Elective (3 crs.)

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- or
- BIO 391 - Biology Internship I Credits: 1-3
- BIO 392 - Biology Internship II Credits: 1-3

### Additional Biology Electives (2-3 crs.)

Electives should be selected with advisement. Biology credits should total at least 41.

### Allied Fields (35 crs.)

#### Geography-Earth Science

Choose one of the following courses:

- ESS 110 - Introduction to Geology Credits: 3
- ESS 210 - Physical Geology Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3

#### Mathematics

Students unable to start at the level of MAT 211 - Calculus I Credits: 4 will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4  
or
- CHM 222 - Modern Organic Chemistry II Credits: 3 and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology, Health Professions Concentration, B.S.**

Students in biology may pursue studies in a number of health sciences including pre-medicine, pre-dentistry, pre-optometry, pre-podiatry, pre-veterinary medicine, pre-pharmacy, pre-chiropractic, and pre-physical therapy. The Health Professions Committee, consisting of members of the Biology and Chemistry departments, provides students with advisement on such matters as course selection, professional school admission test information, and professional school interviews. Health professions-oriented students are encouraged to join the Health Sciences Club. This organization hosts professional program representatives and health care practitioners who discuss admissions procedures and criteria and career opportunities.

Shippensburg University Health Professions Committee Policy regarding support of pre-professional health science applicants is as follows:

The Health Professions Committee, comprised of faculty members from the biology and chemistry departments, provides students who are applying to medical, dental, optometry, podiatric, and veterinary medical programs practice interviews and committee letters of recommendation to support their applications. These particular disciplines are identified because admissions committees for these programs prefer committee

letters of reference in lieu of individual reference letters. Students applying to other health professional programs will obtain individual letters of reference as required for their professional school applications.

The policy of the Shippensburg University Health Professions Committee requires a minimum 3.2 cumulative QPA (medical, dental, veterinary applicants) or 3.0 cumulative QPA (optometry, podiatric applicants) in order for a student to be granted a practice interview and committee letter. For transfer students, at least two semesters must be completed at Shippensburg University before a committee interview and letter will be provided. This minimum QPA requirement is based on the past history of success for former students and the recommendations set forth by professional programs. However, this requirement does not imply these minimum QPAs will be competitive for successful application.

Students should seek counsel from their pre-health advisor regarding the suitability of their qualifications for their desired program of study prior to requesting a committee interview and letter. Committee interviews are typically conducted in mid-April and requests for interviews should be made to the primary health science advisor prior to April 1 of the application year.

## Affiliations

Shippensburg University has several agreements with health professional schools that enable qualified and motivated students to enter a professional program before they complete their requirements for the baccalaureate degree. If students complete at least 90 credits of specific course work (with advisement), Shippensburg University will accept credits transferred from the affiliated program after students complete their first professional year. Students are then awarded a B.S. in biology. Though admission is not guaranteed, the programs do give Shippensburg University students preferred consideration for admission. Accelerated articulation agreements exist with:

- Philadelphia College of Osteopathic Medicine
- Salus University - College of Optometry
- Temple University School of Podiatric Medicine
- Temple University School of Dentistry
- New York Chiropractic College
- Logan Chiropractic College
- Thomas Jefferson University - Jefferson College of Health Professions

An articulation program also exists with Arcadia University's Physician Assistant master's degree program.

The Thomas Jefferson University College of Health Professions affiliation enables students to pursue undergraduate degrees in radiologic sciences, biotechnology, cytotechnology and nursing, a master's degree in occupational therapy, and a doctoral degree in physical therapy. Students complete two or three years of specific course work at Shippensburg University prior to being admitted to Thomas Jefferson University for the professional portion of their program.

Students in the health professions concentration must maintain at least a 2.8 QPA in their major and overall program through graduation. Students who are withdrawn from the health professions track because their QPA has fallen below the 2.8 minimum may reapply when they regain the minimum QPA.

## Biology Core Courses (17 crs.)

Students must earn a "C" or better in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 220 - Microbiology Credits: 4

- BIO 260 - Genetics Credits: 4
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Upper Division Electives (13-14 crs.)

### Physiology Elective:

- BIO 351 - Animal Physiology Credits: 4 or
- BIO 350 - Human Physiology Credits: 4 (required for pre-physical therapy students.)

### Anatomy Elective:

- BIO 370 - Comparative Vertebrate Anatomy Credits: 4 or
- BIO 371 - Human Anatomy Credits: 4 (required for pre-physical therapy students.) or
- BIO 375 - Histology Credits: 3

### Molecular/Cellular Elective:

- BIO 385 - Cell Biology Credits: 3 or
- BIO 418 - Molecular Biology Credits: 3

### Breadth Elective: Choose One

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 330 - Animal Behavior Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 412 - Ichthyology Credits: 3
- BIO 417 - Herpetology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3

## Additional Biology Electives (10-11 crs.)

Electives should be selected with advisement. Certain professional schools may have specific requirements.

BIO 300 - Careers in the Health Professions Credits: 1 (strongly recommended)

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

## Allied Fields (31-34 crs.)

### Mathematics

MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.

- MAT 117 - Applied Statistics Credits: 3  
OR
- MAT 217 - Statistics I Credits: 4
  
- MAT 211 - Calculus I Credits: 4

## Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
  
- CHM 227 - Introduction to Biochemistry Credits: 4 or
- CHM 222 - Modern Organic Chemistry II Credits: 3 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.  
and
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.  
and
- CHM 301 - Biochemistry I Credits: 3 required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Check professional program chemistry prerequisites for other health disciplines.

### Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## **Biology with Secondary Certification, B.S.**

Students enrolled in a program of studies leading to the Bachelor of Science degree with secondary certification will fulfill the following requirements:

### **Biology Core Courses (25 crs.)**

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 430 - Principles of Evolution Credits: 3
- BIO 499 - Capstone Seminar in Biology Credits: 1

## Physiology Elective (4 crs.)

- BIO 350 - Human Physiology Credits: 4 or
- BIO 351 - Animal Physiology Credits: 4

## Additional Biology Electives (9 crs.)

Electives should be selected with advisement. Biology credits should total at least 38.

Please note only 3 credits of research and 3 credits of internship may count as biology electives. Credits in excess of that number count as free electives.

## Allied Fields (24 crs.)

### Mathematics

*MAT 211 Students unable to start at the level of Calculus I will take MAT 175 - Precalculus Credits: 3 or other prerequisite courses.*

- MAT 117 - Applied Statistics Credits: 3
- MAT 211 - Calculus I Credits: 4

### Physics

- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1

### Chemistry

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1

## Note:

Students who have successfully completed more difficult physics and chemistry courses can substitute them for lower level required courses in those fields.

## (Not required but strongly recommended)

- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- CHM 227 - Introduction to Biochemistry Credits: 4

## Prescribed General Education Course (3 crs.)

Students must complete the following course as part of their general education requirements:

- PSY 101 - General Psychology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## Note:

Students seeking certification in secondary education are also required to complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ).

## **Chemistry, B.S.**

Shippensburg University offers a program of study in chemistry approved by the American Chemical Society (ACS). This program is designed for students who seek technical careers in industry or government or graduate work in chemistry. Any student desiring departmental recommendation for graduate work and certification by the American Chemical Society should complete the department core curriculum and the following courses.

## Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

## Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Chemistry Core Curriculum and additional 9 credits in chemistry coursework listed below:

Choose one of the following chemistry seminar courses:

- CHM 312 - Chemistry Seminar Credits: 1
- CHM 313 - Chemistry Seminar Credits: 1
- CHM 314 - Chemistry Seminar Credits: 1
- CHM 315 - Chemistry Seminar Credits: 1
  
- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
  
- CHM 490 - Selected Topics in Chemistry Credits: 1-3 or
- CHM 420 - Biochemistry II Credits: 3
  
- CHM 481 - Advanced Inorganic Chemistry Credits: 4

## Allied Fields (4 crs.)



Arts and sciences students majoring in chemistry must take the following courses in allied fields.

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1

## **Chemistry, Biochemistry Concentration, B.S.**

Biochemistry is the study of chemistry focused on living organisms. The biochemistry concentration is designed to prepare students for careers or graduate study in biochemistry and meets the recommended guidelines of both the American Society for Biochemistry and Molecular Biology and the American Chemical Society. The biochemistry curriculum also prepares students for application to medical, dental, and veterinary school. Students interested in completing the chemistry-biochemistry concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

### **Chemistry Core Curriculum**

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

#### **Required (39 crs.)**

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

#### **Allied Fields (20 crs.)**

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Biochemistry Concentration

Chemistry Core Curriculum and additional 7 credits in chemistry coursework listed below:

*CHM 496 or CHM 497 Introduction to Research 1 cr. [(biochemistry concentration students that desire ACS certification must complete a total of 3 credits in research)]*

- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
- CHM 420 - Biochemistry II Credits: 3
- CHM 421 - Biochemistry Laboratory Credits: 1
- CHM 496 - Introduction to Research I Credits: 1-3
- CHM 312 - Chemistry Seminar Credits: 1

Allied Fields Required (13-14 crs.)

- BIO 260 - Genetics Credits: 4
- BIO 385 - Cell Biology Credits: 3
- BIO 461 - Techniques in Biotechnology Credits: 3

(Choose 1 of the following) 3-4 crs.

- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- BIO 220 - Microbiology Credits: 4
- BIO 408 - Principles of Virology Credits: 3
- BIO 409 - Immunology Credits: 3

## Chemistry, Forensics Concentration, B.S.

The forensics concentration has a curriculum that includes the Chemistry B.S. with additional courses in biology and criminal justice to prepare a student for application to a masters program in forensic science. Ultimately, these students will be candidates for employment in the forensic chemistry field. Students interested in completing the chemistry-forensics concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

Students enrolled in the forensic concentration may apply for an internship at the Cumberland County District Attorney's Office Forensic Laboratory in Carlisle, PA. To be eligible for the internship students must have completed Organic Chemistry II, have a minimum QPA of 3.0, complete a background check and polygraph test at an interview. Students who would like to graduate with ACS certification must take an additional 2 credits in research and CHM 312 - Chemistry Seminar Credits: 1.

## Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

## Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Allied Fields Required (16 crs.)

- CRJ 100 - Introduction to Criminal Justice Credits: 3
- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 336 - Introduction to Forensic Science Credits: 3
- CRJ 456 - Forensic Science: Evidence Analysis Credits: 3
- BIO 260 - Genetics Credits: 4

## **Chemistry, Pre-Pharmacy Concentration, B.S.**

The pre-pharmacy concentration includes a curriculum that prepares students for application to a doctorate in pharmacy (Pharm.D.) program while earning a B.S. in chemistry. The curriculum prepares students for transfer into the first of four professional years of pharmacy school after receiving their B.S in chemistry from Shippensburg University.

Students need not commit to the concentration until the end of their sophomore year. Course advisement will be used when considering the varied requirements of the Pennsylvania colleges of pharmacy; however, all students who opt for this concentration will easily satisfy the course requirements to apply to several pharmacy schools. In addition, students will be encouraged to shadow pharmacists in the area and to attend seminars within our department that will introduce the various jobs that pharmacists perform. The chemistry and biology curriculum requirements prepare students to successfully take the Pharmacy College Admissions Test (PCAT) exam.

Students interested in completing the chemistry-pre-pharmacy concentration must complete all courses in the chemistry core curriculum and those listed below. Students desiring additional preparation and certification by the American Chemical Society should also complete the requirements listed under ACS Certification.

The pre-pharmacy concentration is intended to prepare students who complete four years at Shippensburg University to apply for entrance to the third year of a six-year pharmacy program. Students intending to apply to a pharmacy school will be advised to take an additional 9-10 credits of free electives to specifically meet the pre-professional requirements of individual schools prior to matriculating. Before applying to any pharmacy school, students must take the Pharmacy College Admission Test (PCAT). A competitive score on the PCAT and QPA is required for acceptance into pharmacy school.

## Chemistry Core Curriculum

The following courses are part of the department core curriculum. These courses are required for all chemistry majors and concentrations. All chemistry majors will take a comprehensive examination in the beginning of the fall semester of their senior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

### Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

### Allied Fields (20 crs.)

Arts and Sciences students majoring in chemistry must take the following courses in allied fields.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1

- PHY 206 - Intermediate Physics II Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

## Requirements

Chemistry Core Curriculum and additional 4-5 credits in chemistry coursework listed below:

- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1

Choose 1 of the following

- CHM 420 - Biochemistry II Credits: 3
- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- CHM 490 - Selected Topics in Chemistry Credits: 1-3

Allied Fields Required (11 crs.)

- MAT 117 - Applied Statistics Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 350 - Human Physiology Credits: 4 or
- BIO 371 - Human Anatomy Credits: 4

## Chemistry Secondary Certification, B.S.

Students interested in teaching chemistry in the state of Pennsylvania should enroll in the Chemistry Secondary Education Certification program. Students enrolled in a program of studies leading to the degree of Bachelor of Science with secondary certification will fulfill the chemistry core curriculum and the requirements listed below. Students are expected to graduate with a minimum QPA of 3.0 as required by the state of Pennsylvania for certification. Any student enrolled in chemistry-secondary education desiring the additional preparation for this program and certification by the American Chemical Society must complete the Chemistry- secondary education curriculum and the additional requirements specified under ACS certification.

Teacher Education students majoring in chemistry must take the chemistry core curriculum and the following courses in allied fields. Some of these may be taken as general education

Required (39 crs.)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3

- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Allied Fields (20 crs.)

Teacher Education students majoring in chemistry must take the following courses in allied fields. Some of these may be taken as general education.

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## **Communication/Journalism, Electronic Media Concentration, B.A.**

The electronic media professional emphasis prepares students for careers working in television, radio, cable, web streaming and video production. In addition to being able to take professional classes in areas like electronic news gathering, studio and remote field production, sports journalism, media advertising, and on-air producing and performance, students benefit from hands-on experience through WSYC-FM and SUTV, our student-run radio and television stations, and two professional internship opportunities.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

## 42 crs.

All majors must take 42 credits in the Communication/Journalism major to graduate.

The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

## Theory and Writing Core (15 crs.)

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3

## Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

## Note:

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Electronic Media

- COM 224 - Electronic Media Writing Credits: 3
- COM 284 - Electronic Media Basic Production Credits: 3
- COM 424 - Electronic Media Producing and Performance Credits: 3
- COM 484 - Electronic Media Programming and Management Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

### The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3
- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3
- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

#### Note:

COM 395 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## **Communication/Journalism, Print and Online Media Concentration, B.A.**

The Print & Online Media Professional Emphasis focuses on reporting and writing across a variety of styles and platforms, including breaking news, enterprise journalism and features. These stories are reported and produced using words, video, audio, graphics and various digital applications. The program of study prepares students for jobs in online media outlets and print publications such as newspapers and magazines.

#### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

**42 crs.**

All majors must take 42 credits in the Communication/Journalism major to graduate.



The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

## Theory and Writing Core (15 crs.)

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3

Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

### Note:

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Print Media

- COM 285 - News Writing and Reporting Credits: 3
- COM 293 - Editing Credits: 3
- COM 375 - Public Affairs Reporting Credits: 3
- COM 478 - Digital Journalism Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3
- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3
- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

**Note:**

COM 396 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## **Communication/Journalism, Public Relations Concentration, B.A.**

The public relations professional emphasis prepares students for careers working in media relations, public affairs and digital strategic communications. The department offers a wide range of PR classes that not only teach students how to research, create, design and implement strategic communication plans and campaigns, but also how to use social media effectively in commercial, non-profit and governmental environments. Students have the opportunity to get involved in the PR departments of our student media groups and to join and lead our chapter of the Public Relations Student Society of America (PRSSA), a network of more than 11,000 students across the nation who study and practice professional public relations for real-world clients.

**Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

### **42 crs.**

All majors must take 42 credits in the Communication/Journalism major to graduate.

The Communication/Journalism major consists of a required Communication/Journalism Core (5 courses; 15 credits), a student-selected Professional Emphasis (4 courses; 12 credits), and Communication/Journalism Electives (5 courses; 15 credits).

### **Theory and Writing Core (15 crs.)**

Each student must complete COM 111 and COM 112 with a C or better grade before taking any other communication/journalism courses:

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3

Each student must have the appropriate class standing before taking the final two core courses (6 crs.):

Prior to taking COM 355 students must have Jr. standing and have taken the following: COM 201 & COM 241, or COM 285 & COM 293, or COM 224 & COM 284

- COM 345 - Communication Law and Ethics Credits: 3
- COM 355 - Communication/Journalism Professional Practicum Credits: 3

**Note:**

Once a student has selected a professional emphasis area, he or she can transfer to another area if there is an opening in that emphasis and with the permission of the student's academic advisor.

## Professional Emphasis (12 crs.)

### Public Relations

- COM 201 - Principles of Public Relations Credits: 3
- COM 241 - Public Relations Writing Credits: 3
- COM 381 - Promotional Publication Design Credits: 3
- COM 432 - Public Relations Research and Campaigns Credits: 3

## Communication/Journalism Electives (15 crs.)

Students must complete five courses to complete the major.

- COM 290 - Advertising Copywriting Credits: 3
- COM 305 - Sports Journalism Credits: 3
- COM 335 - Media Advertising and Sales Credits: 3
- COM 360 - Basic Digital Photographic Communication Credits: 3
- COM 362 - Photojournalism Credits: 3

## The Following Elective Courses Require Junior or Senior Status:

- COM 395 - Internship I Credits: 1-6
- COM 396 - Internship II Credits: 1-6
- COM 410 - Women and the Media Credits: 3
- COM 425 - Feature Writing Credits: 3
- COM 451 - Electronic Field Production Credits: 3

- COM 452 - Multimedia Journalism Credits: 3
- COM 460 - Case Studies in Public Relations Credits: 3
- COM 470 - Advanced Digital Photographic Communication Credits: 3
- COM 476 - Magazine Design Credits: 3
- COM 481 - Digital Media Design Credits: 3
- COM 482 - Internet Communication Credits: 3
- COM 490 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 491 - Selected Topics in Communication/Journalism Credits: 1-3
- COM 492 - Selected Topics in Communication/Journalism Credits: 1-3

### Note:

COM 396 and COM 396 may be scheduled through the department secretary by qualified juniors/seniors who have a 2.5 QPA and who have written approval from the department's internship coordinator. Only 6 credits of internship count towards the major; additional internship credits available only by departmental permission.

## Computer Engineering, B.S.

Computer Engineering is a branch of engineering that combines software and electrical engineering to develop computer systems. Computer engineers are involved in the hardware development process, designing and building hardware systems; and they are involved in the software process, designing and building the operating systems and applications programs for those systems. These skills are vital for today's pervasive computing environment, where we are surrounded by systems built from discrete components, microcontrollers, embedded Systems-On-a-Chip, and reconfigurable logic devices.

The curriculum is designed to be a four-year, 120-credit-hour engineering program. The curriculum meets or exceeds national Computer Engineering academic standards. Generally, the curriculum requires 20 credits of computer engineering, 12 credits of computer science, 8 credits of elective/internship credit, 23 credits of mathematics, 20 credits of physics and engineering, and 39 credits of general education and basic science.

Students will learn how to program machines in a variety of languages, including C, Java, and Assembly languages; they will use CAD tools to design, build, and test printed circuit boards with microcontrollers, write software for their board, and integrate into existing systems; they will develop software for System-On-a-Chip systems using embedded operating systems and applications frameworks, they will build applications for mobile phones, and they will implement common algorithms on Digital Signals Processors; and they will use EDA tools to program reconfigurable FPGA devices for high-performance applications. Throughout this work, students will use sound engineering practices to guide their development processes.

## Core Requirements

### Engineering Core (12 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

## Physics (20 crs.)

- PHY 123 - Physics I Laboratory Credits: 1  
and
- PHY 205 - Intermediate Physics I Credits: 3  
OR
- PHY 221 - Fundamentals of Physics I Credits: 5
  
- PHY 125 - Physics II Laboratory Credits: 1  
and
- PHY 206 - Intermediate Physics II Credits: 3  
OR
- PHY 222 - Fundamentals of Physics II Credits: 5
  
- PHY 355 - Electronics Credits: 4

## Mathematics (23 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 322 - Differential Equations Credits: 3

## Computer Science and Engineering (32 crs.)

For the capstone experience, a student can take either CMPE 498 or CMPE 499.

- CMPE 220 - Computer Organization Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CMPE 322 - Microcontrollers & Interfaces Credits: 4
- CMPE 420 - Digital and Reconfigurable Computing Credits: 4
- CMPE 498 - Engineering Research Methods Credits: 2
- CMPE 499 - Engineering Design & Development Credits: 2
- CSC 431 - Computer Networks Credits: 4

## Electives (8 crs.)

8 credits of CMPE or ELEC courses at 300 level or higher, internship, or CS course with departmental approval.

- CS or Engineering Elective/Internship

## **Computer Science, Computer Graphics Concentration, B.S.**

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

## Core Requirements (47 crs.)

### Mathematics

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

### Computer Science

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

### Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

### Computer Graphics Concentration (19-20 crs.)

- CSC 350 - Introduction to Computer Graphics Credits: 4
- CSC 361 - Video Game Programming Credits: 4
- CSC 451 - Computer Graphics Algorithms Credits: 4
- CSC/SWE/CMPE/ELEC Elective at 300 level or above

### Interdisciplinary Course (Choose one):

- ART 217 - Computer Design I Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 339 - Remote Sensing Credits: 3

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

### Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

## **Computer Science, Related Discipline Concentration, B.S.**

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

## Core Requirements (47 crs.)

### Mathematics

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

### Computer Science

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

### Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

### Related Discipline Concentration



- 2 CSC/SWE/CMPE/ELEC Electives at the 300 level or above
- Major/Minor in other discipline

\*No electives can overlap with your other major/minor

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

### Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

## **Criminal Justice, B.S.**

(60 crs.)

### Required Core (21 crs.)

- CRJ 100 - Introduction to Criminal Justice Credits: 3
- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 221 - Policing a Democracy Credits: 3
- CRJ 241 - Survey of Corrections Credits: 3
- CRJ 309 - Theories of Crime and Crime Control Credits: 3
- CRJ 310 - Research Methods Credits: 3
- CRJ 452 - Race, Ethnicity, and Crime Credits: 3

## Criminal Justice Electives (21 crs.)

- CRJ 321 - Criminal Investigation Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 336 - Introduction to Forensic Science Credits: 3
- CRJ 342 - Crime Prevention Credits: 3
- CRJ 345 - Organization & Management of CRJ Agencies Credits: 3
- CRJ 351 - Juvenile Justice Credits: 3
- CRJ 356 - Organized Crime Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 365 - White Collar Crime Credits: 3
- CRJ 370 - Mock Trial Credits: 3
- CRJ 390 - Selected Topics in Criminal Justice Credits: 3
- CRJ 393 - Selected Topics in Criminal Justice Credits: 3
- CRJ 396 - Selected Topics in Criminal Justice Credits: 3
- CRJ 397 - Selected Topics in Criminal Justice Credits: 3
- CRJ 411 - Terrorism Credits: 3
- CRJ 433 - Evidence Law Credits: 3
- CRJ 440 - Community Corrections Credits: 3
- CRJ 456 - Forensic Science: Evidence Analysis Credits: 3
- CRJ 461 - Social Construction of Homicide Credits: 3
- CRJ 463 - Comparative Criminal Justice Credits: 3
- CRJ 464 - Popular Culture, Crime and Justice Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- CRJ 471 - Internship in Criminal Justice I Credits: 3
- CRJ 472 - Internship in Criminal Justice II Credits: 3
- CRJ 473 - Internship in Criminal Justice III Credits: 3
- CRJ 474 - Internship in Criminal Justice IV Credits: 3
- CRJ 490 - Selected Topics in Criminal Justice Credits: 3
- CRJ 491 - Selected Topics in Criminal Justice Credits: 3

### Note:

CRJ 471, CRJ 472, CRJ 473, CRJ 474 Each 3 credit Internship = 120 hours of work

## Capstone Course (3 crs.)

- CRJ 454 - Policy, Professionalism, and Ethics Credits: 3

## Interdisciplinary Courses (15 crs.)

Students must complete five courses, 200-level or above. Criminal Justice or Military Science courses will not fulfill this requirement.

## Required General Education Courses (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## **Early Childhood/Elementary Education: PK-4, B.S.Ed.**

Minimum of 120 credit hours required

### Required Courses

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3  
OR
- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- MAT 110 - Fundamentals of Mathematics I Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3
- PSY 101 - General Psychology Credits: 3

### Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

### Biology (3 crs.)

Choose one:

- BIO 100 - Basic Biology Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3

### Physical Sciences (3 crs.)

Choose one:

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1 and

- PHY 121 - Introductory Physics I - Lecture Credits: 3  
or
- PHY 205 - Intermediate Physics I Credits: 3
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- CHM 121 - Chemical Bonding Credits: 3

## Earth Sciences (3 crs.)

Choose one:

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3
- BIO 145 - Environmental Biology Credits: 3

### \*Note:

One course in either biology, physical sciences, or earth sciences must be a lab course. BIO 142, BIO 162 , BIO 208, BIO 242, CHM 105, ESS 110, ESS 111, ESS 210, PHY 121, PHY 205.

## Fine Arts (6 crs.)

(Choose 2 from different disciplines)

### Discipline 1

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Discipline 2

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3
- THE 121 - Introduction to the Theatre Credits: 3

## Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

### Discipline1

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

## Discipline 2

- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Literature Elective (3 crs.)

Choose one:

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

## Professional Core (60 crs.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 220 - Developmental Science: Physical, Motor, & Health Credits: 3
- ECH 260 - Developmental Science: Cognitive & Language Credits: 3
- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3
- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 343 - Mathematics Methods I for PreKindergarten & Kindergarten Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- ECH 480 - Early Childhood Professional Seminar Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3
- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4

## Student Teaching Semester

- ECH 489 - Early Childhood Student Teaching Credits: 1-12

## **Earth and Space Science, B.S.Ed.**

## Major (24 crs.)

### Required (12 crs.)

- ESS 210 - Physical Geology Credits: 3
- ESS 212 - Historical Geology Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 220 - Oceanography Credits: 3

### Electives in Earth Science (12 crs.)

Selected with advisement

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 397 - Introduction to Research Credits: 1-3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3

## Allied Fields (36 crs.)

Certification in earth science, general science and environmental education requires the following courses:

### Biology (9 Hours by Advisement)

- BIO 145 - Environmental Biology Credits: 3
- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 208 - Field Biology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 419 - Ornithology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Chemistry (8 Hours for General Science)

- CHM 121 - Chemical Bonding Credits: 3

- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

## Physics (11 Hours for General Science)

- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1

## Math (8+ Hours by Advisement)

- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## Professional Education Requirements (33 crs.)

### Required Courses

- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## **Economics, Business Concentration, B.S.**

This concentration combines a solid background in economics with a significant exposure to important business-related analytical and conceptual skills. By completing the business minor students will gain an appreciation for managerial decision making and develop an awareness of how business skills are applied.

### Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## Course Requirements

### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

#### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Business Concentration

### Required Mathematics/Statistics (9-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4
- SCM 200 - Statistical Applications in Business Credits: 3

#### Note:

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*



## Required Business Courses (18 crs.)

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- Three credits from either a finance or accounting course
- Three additional John L. Grove College of Business credits

### Note:

SCM 200 requires MIS 142 as a prerequisite.

Students will have completed the required 18 credits for the business minor

## Economics, Mathematics Concentration, B.S.

This concentration would be especially well-suited for students preparing for graduate study in economics, which has become increasingly focused upon mathematics and statistical analysis.

Students are strongly encouraged to take ECO 484 Mathematical Economics and ECO 485 Econometrics as economics electives.

## Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## Course Requirements

### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Mathematics Concentration

### Required Math/Statistics Courses (21-23 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 217 - Statistics I Credits: 4

Plus three additional mathematics courses from among the following.

Other mathematics courses at the 200-level or above may be substituted, with advisement. At least two of these additional courses must be at the 300-level or above. Students will have completed the required 21 credits for the mathematics minor.

- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 317 - Statistics II Credits: 3
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 322 - Differential Equations Credits: 3
- MAT 425 - Advanced Algebraic Structures Credits: 3

## Economics, Political Science Concentration, B.S.

This combination will be appropriate for students planning to pursue careers in government, business, law, or international relations. While combining some aspects of a traditional political economy approach, this concentration will also heighten students' knowledge of the institutional and legal dimensions of major public policy debates.

### Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

### Course Requirements

#### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

**Note:**

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Political Science Concentration

### Required Math/Statistics Courses (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

**Note:**

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Required Political Science Courses (18 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS - Plus six additional political science credits three of which must be at the 300 level or higher

**Note:**

To fulfill the requirements for the minor in Political Science, students will have to complete PLS 141 and one additional course.

# Economics, Public Administration Concentration, B.S.

This sequence of courses would prepare students for careers in the public sector at either the local, state, or federal level, as well as for graduate studies. Economics strongly complements the policy and institutional focus of public administration.

## Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

## Course Requirements

### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Public Administration Concentration

### Required Math/Statistics Sequence (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4

- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

**Note:**

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

**Required Public Administration Courses (18 crs.)**

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 371 - Public Management Credits: 3 or
- PLS 373 - Public Financial Administration Credits: 3

Plus three additional Public Administrative credits from among the following:

- PLS 231 - State and Local Government Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- Plus three additional political science or public administrative credits to fulfill the requirements for the minor

**Economics, Social Science Concentration, B.S.**

Intended for students pursuing a broad based approach to understanding contemporary social issues, the social science concentration would be similar to traditional liberal arts or B.A. degree in economics. Students are encouraged to consider studying a foreign language as a purposeful use of some of their free elective credits.

**Economics B.S.**

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

**Course Requirements**

**Required Economics (27 crs.)**

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3

- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

**Note:**

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

## Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Social Science Concentration

### Required Mathematics Sequence (10-12 crs.)

- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3 or
- MAT 175 - Precalculus Credits: 3
  
- MAT 181 - Applied Calculus Credits: 3 or
- MAT 211 - Calculus I Credits: 4
  
- MAT 117 - Applied Statistics Credits: 3 or
- MAT 217 - Statistics I Credits: 4

**Note:**

*MAT 140A or MAT 140B not required if math placement test level is 5 or 6.*

### Allied Fields (18 crs.)

Students concentrating in the social sciences must take the following courses and credits in the appropriate allied fields.

#### Political Science

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS - Political Science elective at the 300 level or higher with advisement

#### Sociology or Anthropology

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 or
- ANT 111 - Cultural Anthropology Credits: 3

- Plus a 300 level elective in either disciplines selected with advisement

## Geography, History, or Philosophy

- Two courses from one of these disciplines inclusive of a 300 level elective selected with advisement. Note: HIS 105 and HIS 106 do not fulfill this requirement.

## Electrical Engineering, B.S.

The Bachelor of Science in Electrical Engineering (EE) program provides a balance between theory and practice, and is designed to meet national accreditation requirements. Ship's EE program prepares students for careers in a broad array of electrical engineering fields including:

- Semiconductor and circuit design
- Mixed-signal embedded systems
- Industrial controls
- Communications system engineering

Students will learn about the impact of engineering solutions in a global, economic, environmental, and social context. Graduates will have an ability to use techniques, skills, and modern engineering tools necessary for engineering practice, and will engage in life-long learning to continue developing their skills and knowledge of the practice.

## Degree Requirements

### Math Cognate Courses (22 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 322 - Differential Equations Credits: 3
- MAT 375 - Probability and Statistics for Engineers Credits: 4

### Physics Courses (20 crs.)

- PHY 123 - Physics I Laboratory Credits: 1  
and
- PHY 205 - Intermediate Physics I Credits: 3  
OR
- PHY 221 - Fundamentals of Physics I Credits: 5
  
- PHY 125 - Physics II Laboratory Credits: 1  
and
- PHY 206 - Intermediate Physics II Credits: 3  
OR
- PHY 222 - Fundamentals of Physics II Credits: 5
  
- PHY 311 - Quantum I Credits: 4

- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 355 - Electronics Credits: 4

## Engineering Core (12 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

## Computer Engineering Courses (14 crs.)

Student can choose either CMPE 498 or CMPE 499

- CMPE 220 - Computer Organization Credits: 4
- CMPE 322 - Microcontrollers & Interfaces Credits: 4
- CMPE 420 - Digital and Reconfigurable Computing Credits: 4
- CMPE 498 - Engineering Research Methods Credits: 2 or
- CMPE 499 - Engineering Design & Development Credits: 2

## Electrical Engineering Courses (12 crs.)

- ELEC 210 - Signals and Systems Credits: 4
- ELEC 300 - Foundations of Electronic Systems Credits: 4
- ELEC 360 - Communications Systems Credits: 4

## Electives (4 crs.)

CMPE or ELEC courses, 300 level or above, or Internship

## **Elementary/Middle Level Education: Grades 4-8, English/Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies



- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

### Concentration Area

#### Language Arts (30 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- ENG 190 - General Education Special Topics Credits: 3 or
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
  
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- TCH 303 - Books and Materials for Children Credits: 3

#### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

### Cognate Areas

#### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

## Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

## Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

### Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

## Fine Arts (6 crs.) (Select two from different disciplines)

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

### Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

**Theatre**

- THE 121 - Introduction to the Theatre Credits: 3

**Note:**

THE 121 meets general education requirements

**Social and Behavioral Sciences (6 crs.)**

- PSY 101 - General Psychology Credits: 3

**Note:**

PSY 101 meets general education requirements

**Choose one of the following:**

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

**Note:**

ANT 111, GEO 140, SOC 101 meet general education requirements

**Professional Core and Student Teaching (42 crs.)**

**Middle Level Cognitive Development**

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

**Early Adolescent and Adolescent Learning Theory**

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

**Assessments and Interventions**

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (15 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Math and Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

### **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

## Mathematics (20 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

## English/Language Arts (21 crs.)

- ENG 190 - General Education Special Topics Credits: 3 or
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
  
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
  
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3

### Note:

ENG 190, ENG 248, ENG 250, ENG 114 , ENG 115 meet general education requirements

## Cognate Areas

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or

- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

**Note:**

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

### Writing/Fluency Competencies (3 crs.)

- HCS 100 - Introduction to Human Communication Credits: 3

**Note:**

HCS 100 meet general education requirements

### Fine Arts (6 crs.)

**(Select two from different disciplines)**

#### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

#### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

**Note:**

MUS 110, MUS 121, MUS 261 meet general education requirements

#### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meets general education requirements

Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3
- TCH 342 - Teaching Middle Level Mathematics Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Math and Science Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

### Mathematics (20 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4



- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

**Note:**

MAT 110 , MAT 111 meet general education requirements

**Science (22-23 crs.)**

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

**Note:**

BIO 100, CHM 105, ESS 110 meet general education requirements

**Cognate Areas**

**Social Studies (12 crs.)**

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
  
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

**Note:**

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

**Language Arts (12 crs.)**

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3

- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

**Note:**

ENG 114 , ENG 115 , HCS 100 meet general education requirements

**Literature (3 crs.)**

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

**Note:**

ENG 243, ENG 248, ENG 250 meet general education requirements

**Fine Arts (6 crs.)**

**(Select two from different disciplines)**

**Art**

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 399 - Independent Study Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

**Music**

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

**Note:**

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

### Note:

PSY 101 meets general education requirements

### Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

### Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 342 - Teaching Middle Level Mathematics Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Math and Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

### **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

### Mathematics (20 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

**Note:**

MAT 110, MAT 111 meet general education requirements

## Social Studies (21 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- ECO 345 - The Economics of Growth and Development Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

**Note:**

GEO 101, ECO 101, HIS 105, HIS 106 meet general education requirements

## Cognate Areas

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

**Note:**

BIO 100, ESS 110 meet general education requirements

## Language Arts (12 crs.)

- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3
  
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3

### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Literature

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

### Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3

- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meet general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 342 - Teaching Middle Level Mathematics Credits: 3
- TCH 348 - Teaching Middle Level Social Studies Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Mathematics Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.



## Concentration Area

### Mathematics (30 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 333 - Geometry Credits: 3

### Choose Two of the Following:

- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 326 - Mathematical Modeling Credits: 3
- MAT 400 - History of Mathematics Credits: 3

## Cognate Areas

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

**Note:**

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

**Literature (3 crs.)**

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

**Note:**

ENG 243, ENG 248, ENG 250 meet general education requirements

**Fine Arts (6 crs.)**

(Select two from different disciplines)

**Art**

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

**Music**

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

**Note:**

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Note:

THE 121 meets general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

### Note:

PSY 101 meets general education requirements

### Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

### Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 342 - Teaching Middle Level Mathematics Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Science and English/Language Arts Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Areas

Science (22-23 crs.)

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3 and
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

## English/Language Arts (21 crs.)

- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3 or
- ENG 250 - Introduction to Literature Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3

### Note:

ENG 190 , ENG 248 ENG 250 , ENG 114 , ENG 115 meet general education requirements

## Cognate Areas

### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
- ECO 101 - Principles of Macroeconomics Credits: 3 or
- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3

- HIS 106 - Thinking Historically in a Global Age Credits: 3

### Note:

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

## Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Note:

MAT 110, MAT 111 meet general education requirements.

## Writing/Fluency Competencies (3 crs.)

- HCS 100 - Introduction to Human Communication Credits: 3

### Note:

HCS 100 meets general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

### Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3

- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

Note:

MUS 110, MUS 121, MUS 261 meets general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meets general education requirements

Choose one:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- RDG 329 - Reading in the Content Areas Credits: 3
- TCH 322 - Teaching Middle Level Language Arts Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# **Elementary/Middle Level Education: Grades 4-8, Science and Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## **Option 2: Double Certifications**

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.



## Concentration Areas

### Science (22-23 crs.)

- BIO 100 - Basic Biology Credits: 3 or
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- CHM 105 - An Observational Approach Credits: 3
- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- BIO 142 - Introduction to Ecology Credits: 3 or
- BIO 145 - Environmental Biology Credits: 3

#### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

### Social Studies (21 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- ECO 345 - The Economics of Growth and Development Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

#### Note:

ECO 101 , GEO 101 , HIS 105 , HIS 106 meet general education requirements

## Cognate Areas

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
  
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

#### Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

#### Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

### Fine Arts (6 crs.)

**(Select two from different disciplines)**

#### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3

- ART 339 - History of American Art Credits: 3

Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

## Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

## Theatre

- THE 121 - Introduction to the Theatre Credits: 3

Note:

THE 121 meet general education requirements

## Social and Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Note:

PSY 101 meet general education requirements

Choose one of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

Note:

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

## Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

## Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

## Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

## Middle Level Teaching Methods

- TCH 348 - Teaching Middle Level Social Studies Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

## English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

## Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Science Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

## **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science
- Mathematics
- Social Studies
- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

### Science (31 crs.)

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
  
- BIO 208 - Field Biology Credits: 3 or
- BIO 242 - Ecology Credits: 3
  
- CHM 105 - An Observational Approach Credits: 3
  
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1  
or
- PHY 122 - Introductory Physics II - Lecture Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
  
- ESS 210 - Physical Geology Credits: 3 or
- ESS 220 - Oceanography Credits: 3 or
- ESS 355 - Meteorology Credits: 3 or
- ESS 404 - Applied Meteorology and Climatology Credits: 3

### Note:

BIO 161, CHM 105, ESS 110, meet general education requirements

### Cognate Areas

#### Social Studies (12 crs.)

- GEO 101 - World Geography Credits: 3
  
- ECO 101 - Principles of Macroeconomics Credits: 3 or

- PLS 100 - U.S. Government and Politics Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

**Note:**

GEO 101, ECO 101, PLS 100, HIS 105, HIS 106 meet general education requirements

**Mathematics (12 crs.)**

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

**Language Arts (12 crs.)**

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

**Note:**

ENG 114 , ENG 115 , HCS 100 meet general education requirements

**Additional Coursework**

**Literature (3 crs.)**

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

**Note:**

ENG 243, ENG 248, ENG 250 meet general education requirements

**Fine Arts (6 crs.)**

(Select two from different disciplines)

**Music**

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

**Note:**

MUS 110, MUS 121, MUS 261 meet general education requirements

**Art**

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

**Note:**

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

ART 101 is recommended

**Theatre**

- THE 121 - Introduction to the Theatre Credits: 3

**Note:**

THE 121 meets general education requirements

**Social and Behavioral Sciences (6 crs.)**

- PSY 101 - General Psychology Credits: 3

**Note:**

PSY 101 meets general education requirements

**Choose one of the following:**

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

**Note:**

ANT 111, GEO 140, SOC 101 meet general education requirements

## Professional Core and Student Teaching (39 crs.)

### Middle Level Cognitive Development

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### Early Adolescent and Adolescent Learning Theory

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### Assessments and Interventions

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### Adaptations and Accommodations for Diverse Learners

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### Middle Level Teaching Methods

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 366 - Teaching Science at the Middle Level Credits: 3

### English Language Learners (ELL)

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Student Teaching (12 crs.)

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## **Elementary/Middle Level Education: Grades 4-8, Social Studies Concentration, B.S.Ed.**

(Minimum of 120 credit hours required)

### **Option 1: Single Certification**

Students choose one area in which they will be certified to teach. Options include:

- Science



- Mathematics
- Social Studies
- English/Language Arts.

## Option 2: Double Certifications

Students choose two areas in which they will be certified to teach. One area must be math or science. Options include:

- Science and Mathematics;
- Science and Social Studies;
- Science and English/Language Arts;
- Mathematics and Social Studies; and
- Mathematics and English/Language Arts.

## Concentration Area

### Social Studies (33 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- GEO 101 - World Geography Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

Choose One:

- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 415 - Regional Geographic Studies Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

Choose One:

- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

Choose One:

- HIS 301 - The West in American History Credits: 3
- HIS 302 - American Business History Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 305 - The Civil War Era Credits: 3
- HIS 309 - History of the American Worker Credits: 3
- HIS 314 - History of Jacksonian America Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 338 - Colonial America Credits: 3

- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 402 - Revolutionary America Credits: 3
- HIS 413 - Pennsylvania History Credits: 3

Choose One:

- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3

### Note:

ECO 101, GEO 101, GEO 140, HIS 105, HIS 106 meet general education requirements

## Cognate Areas

### Mathematics (12 crs.)

- MAT 105 - Mathematics for Liberal Studies Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3

### Science (12 crs.)

- BIO 100 - Basic Biology Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- ESS 110 - Introduction to Geology Credits: 3

### Note:

BIO 100, CHM 105, ESS 110 meet general education requirements

### Language Arts (12 crs.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3 or
- ENG 115 - Advanced Placement Writing Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- RDG 232 - Reading in the Elementary School Credits: 3
- RDG 329 - Reading in the Content Areas Credits: 3

## Note:

ENG 114 , ENG 115 , HCS 100 meet general education requirements

## Literature (3 crs.)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

## Note:

ENG 243, ENG 248, ENG 250 meet general education requirements

## Fine Arts (6 crs.)

**(Select two from different disciplines)**

### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

## Note:

ART 101, ART 231, ART 232, ART 274, ART 339 meet general education requirements

### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

## Note:

MUS 110, MUS 121, MUS 261 meet general education requirements

### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

**Note:**

THE 121 meet general education requirements

## **Social and Behavioral Sciences (3 crs.)**

- PSY 101 - General Psychology Credits: 3

**Note:**

PSY 101 meet general education requirements

## **Professional Core and Student Teaching (39 crs.)**

### **Middle Level Cognitive Development**

- TCH 206 - Social Foundations of Middle Level Education Credits: 3

### **Early Adolescent and Adolescent Learning Theory**

- TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3

### **Assessments and Interventions**

- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 345 - Assessment and Evaluation Strategies Credits: 3

### **Adaptations and Accommodations for Diverse Learners**

- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3

### **Middle Level Teaching Methods**

- TCH 251 - Elements of Middle Level Instruction Credits: 3
- TCH 348 - Teaching Middle Level Social Studies Credits: 3

### **English Language Learners (ELL)**

- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### **Student Teaching (12 crs.)**

- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

# English, Literary Studies, B.A.

Students pursuing a B.A. in English-Literary Studies focus intensively on English, American, and Global literatures, becoming proficient in research methods and textual analysis. This degree prepares them to enter into a variety of fields post-graduation, including advanced graduate studies, journalism, publishing, public relations, and law, just to name a few. With an English major, future career possibilities are endless. English majors are currently in high demand due to their communication skills, writing skills, and ability to think critically in regards to problem solving.

## Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## English Major Requirements (42 crs.)

### Required Courses (9 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

### Required Survey Courses (9 crs.)

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

## Advanced Studies in Literature

Students must take at least 1 course in each category. (Note: students must take 4 additional courses in this section to reach the 24 credit hours required.)

## Writing

Complete at least 1 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3

- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3
- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

## History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 430 - Special Topics in Literary History and Movements Credits: 3

## Identities

Complete at least 1 of the following:

- ENG 445 - Special Topics in Identities Credits: 3

- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3

## **English, Writing Concentration, B.A.**

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **English Major Requirements (42 crs.)**

#### **Required Courses (9 crs.)**

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

#### **Required Survey Courses (9 crs.)**

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

#### **Writing (12 crs.)**

Complete 4 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3

- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Advanced Studies in Literature (12 crs.)

Complete at least 1 course in each category. (Note: students must take 1 additional course in this section to reach the 12 credit hours required.)

### Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3
- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

### History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3



## Identities

Complete at least 1 of the following:

- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 445 - Special Topics in Identities Credits: 3

## English with Secondary Certification, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## English Major Requirements (39 crs.)

Students receiving certification must take one course in world literature (ENG 240 or ENG 385).

### Required Courses (15 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3
- ENG 213 - Writing and Research About Literature Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3
- ENG 426 - Teaching Adolescent Literature Credits: 3
- ENG 460 - Senior Seminar Credits: 3

### Required Survey Courses (9 crs.)

- ENG 233 - American Literature I Credits: 3  
OR
- ENG 236 - British Literature I Credits: 3
- ENG 234 - American Literature II Credits: 3  
OR
- ENG 237 - British Literature II Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3  
OR
- ENG 240 - Global Literature Credits: 3

### Advanced Studies in Literature (15 crs.)

Complete at least 1 course in each category. (Note: students must take 1 additional course in this section to reach the 15 credit hours required.)

## Writing

Complete at least 1 of the following:

- ENG 224 - Introduction to Creative Writing Credits: 3
- ENG 229 - Advanced Composition Credits: 3
- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 307 - Poetry Writing Credits: 3
- ENG 308 - Fiction Writing Credits: 3
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 335 - Creative Nonfiction Writing Credits: 3
- ENG 341 - Teaching Writing in the Secondary Schools Credits: 3
- ENG 420 - Special Topics in Writing Credits: 3
- ENG 427 - Advanced Poetry Workshop Credits: 3
- ENG 428 - Advanced Fiction Workshop Credits: 3
- ENG 435 - Advanced Creative Nonfiction Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3

## Genres

Complete at least 1 of the following:

- ENG 304 - Literary Criticism Credits: 3
- ENG 333 - Cultural Studies Credits: 3
- ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3
- ENG 342 - Mythology Credits: 3
- ENG 360 - Popular Genres Credits: 3
- ENG 367 - Studies in Drama Credits: 3
- ENG 368 - Studies in Fiction Credits: 3
- ENG 369 - Studies in Poetry Credits: 3
- ENG 373 - Studies in Creative Nonfiction Credits: 3
- ENG 440 - Special Topics in Genre Credits: 3

## History and Movements

Complete at least 1 of the following:

- ENG 318 - Studies in English Renaissance Literature Credits: 3
- ENG 330 - Shakespeare Credits: 3
- ENG 337 - Romanticism Credits: 3
- ENG 344 - Studies in Single Author Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 363 - Modernism Credits: 3
- ENG 364 - Postmodernism Credits: 3
- ENG 366 - History and Structure of the English Language Credits: 3

- ENG 376 - Studies in Medieval Literature Credits: 3
- ENG 377 - The Long 18th Century Credits: 3
- ENG 380 - 19th Century Literature Credits: 3
- ENG 383 - Literature After 1900 Credits: 3
- ENG 430 - Special Topics in Literary History and Movements Credits: 3

## Identities

- ENG 345 - Women's Literature Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 359 - Native American Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- ENG 445 - Special Topics in Identities Credits: 3

## Required General Education Course

- PSY 101 - General Psychology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 290 - Introduction to English/Language Arts Education Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EDU 422 - Methods of Teaching English in Secondary Schools Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## Note:

Students seeking certification in secondary education must also complete 2 math courses (except MAT 185).

## Environmental Education Certification

Shippensburg University offers an approved program in environmental education. The program may be taken by elementary education majors as an academic sequence or by secondary education majors in biology or geography/earth science. Secondary students in other fields may enroll in the program with the permission of their department chair.

The environmental education program at Shippensburg is a somewhat structured program, but it also allows for much diversity in the selection of courses for the completion of the requirements for certification. Certification allows the teacher to instruct any subject matter that is labeled as environmental education in any grade from kindergarten through the 12th grade.

To receive the certification a student must complete a minimum of 24 credits from the courses described below. The only course which is required of all students is EDU 410 - Environmental Education Practicum Credits: 3.

The practicum is offered during fall semester of odd numbered years and summers during even numbered years.

The additional 21 credits may be selected in a variety of ways. Among the 21 credits, a minimum of 12 credits must be selected from core courses and 9 credits must be selected from courses outside of the student's major field of study. These 21 credits must be selected from a minimum of three departments of the university and include a statistics course.

**24 crs.**

## Required Course

- EDU 410 - Environmental Education Practicum Credits: 3

## Core Courses (12 crs. minimum)

The student must select a minimum of one course from each of the four categories (A-D) below. Additional courses may be counted toward Related Electives.

### Category A

- BIO 142 - Introduction to Ecology Credits: 3
- BIO 242 - Ecology Credits: 3

### Category B

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Category C

- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3

### Category D

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3

## Related Electives

Any remaining credits must be selected from the courses listed below. It is recommended students take as broad a base of courses as possible if they have a strength in one of the science areas. If an area of strength is not evident, it is recommended that the remaining electives be used to establish one.

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
- BIO 205 - Marine Biology Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 245 - Marine Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- BIO 362 - Invertebrate Zoology Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3
- ECO 310 - Public Finance Credits: 3
- ECO 340 - Introduction to Regional Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 371 - Public Management Credits: 3
- MAT 117 - Applied Statistics Credits: 3

## Note:

BIO 205, BIO 245, BIO 446 are offered at the Marine Science Consortium, Wallops Island, Virginia.

A student should normally indicate interest in receiving the certification early in his/her undergraduate studies. This interest should be communicated to his/her advisor or department chair so a suitable program can be planned which will allow the student to complete the requirements within a normal four-year program. Students and advisors are urged to consult the catalog for any prerequisites for courses above the 100 levels.

## **Exercise Science, B.S.**

Transfer students, both internal and external, are selected for admission based on the following criteria:

- Academic proficiency in college or university course work, including a 2.75 QPA.
- Completion of 15 credits, including a C or better in BIO 161, BIO 162 or BIO 237
- Selection is competitive and students will be selected from those who fulfill the above requirements.

## Exercise Science Requirements (47-53 crs.)

- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 321 - Exercise Physiology I Credits: 4
- ESC 333 - Biomechanics Credits: 4
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 336 - Motor Behavior Credits: 3
- ESC 350 - Nutrition for Sport & Fitness Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3
- ESC 420 - Cardiac Rehab and Special Populations Credits: 4
- ESC 421 - Exercise Physiology II Credits: 4
- ESC 422 - Exercise Testing and Prescription Credits: 3
- ESC 424 - Internship Credits: 6-12
- Electives: Credits: 6-12 (Depending on Internship)

## Required General Education Courses

Students must complete the following courses as part of their general education requirements:

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- CHM 105 - An Observational Approach Credits: 3  
OR
- CHM 121 - Chemical Bonding Credits: 3 *and*
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- MAT 117 - Applied Statistics Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1
- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3  
OR
- WST 100 - Introduction to Women's and Gender Studies Credits: 3

### Please Note:

Students taking CHM 121 will need to complete CHM 125 as an elective choice. Students taking PHY 121 will need to complete PHY 123 as an elective choice.

### Note:

All students are required to acquire certification by attending an American Red Cross (ARC) or American Heart Association (AHA) or National Safety Council (NSC) workshop at the students' expense. All students doing an internship must hold current certifications (at the students' expense): First aid, CPR certification, child abuse; criminal record, TB test, and proof of insurance liability.

**Students are required to achieve a grade of C or above in all Exercise Science courses.**

All students are required to take one certification examination at the student's expense. This examination must be completed before the student's diploma may be released. These include:

1. American College of Sports Medicine Certified Health Fitness Specialist exam (ACSM-HFS), or
2. American College of Sports Medicine Certified Personal Trainer exam (ACSM-CPT), or
3. National Strength and Conditioning Association Certified Personal Trainer (NSCA-CPT) exam, or
4. National Strength and Conditioning Association Certified Strength and Conditioning Specialist (NSCA-CSCS) exam.

## **Finance, B.S.B.A.**

Finance is the study and practice of making money-denominated decisions. Individuals, business corporations, and government agencies located worldwide are all concerned with securing, managing, and investing funds efficiently; i.e., they must practice sound financial decision making. As a discipline, finance can be classified into six areas: corporate financial management, investments, financial institutions and markets, banking and insurance, personal financial planning, and real estate investment and valuation. The finance program at Shippensburg University offers a full range of courses in these areas. Our program is unique in the emphasis placed on the application of finance concepts. In addition to two applied courses in market, company, and security analysis, the finance major can apply for admission to the Investment Management Program class. In this class students utilize their accumulated knowledge and skills in the management of a real-money investment portfolio.

By the beginning of the sophomore year, a student majoring in finance will be expected to have access to a personal computer which is compatible with the hardware and software used in the finance program. Our computer labs, though well-equipped, are utilized by a large percentage of students from the college of business. Due to this high demand, a personal computer is invaluable to fulfilling the major finance course requirements.

### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3

- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (12 crs.)

- FIN 312 - Investments Credits: 3
- FIN 313 - Advanced Financial Management Credits: 3
- FIN 314 - Financial Institutions Credits: 3
- FIN 333 - Applied Company and Security Analysis Credits: 3

### Electives (6 crs.)

(Two courses from the following 3-credit courses)

- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 322 - Estate Planning Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 393 - Selected Topics in Finance Credits: 1-3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- FIN 414 - Bank Management Credits: 3
- FIN 421 - Personal Financial Planning Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- FIN 434 - Investment Management Program Credits: 1-3
- FIN 435 - Investment Management Program Credits: 1-3



- FIN 442 - Derivatives Markets Credits: 3
- FIN 490 - Selected Topics in Finance Credits: 1-3

## Finance Career Opportunities

Students develop a wide range of analytical skills with both theoretical and real problems and can, therefore, choose a career within a full spectrum of jobs: corporate financial analyst (revenue and capital budget), financial planner, security analyst, portfolio manager or analyst, pension fund manager, security broker or dealer, banking industry analyst, mortgage analyst, corporate risk manager, or consultant on mergers and acquisitions.

Shippensburg University graduates who majored in finance have obtained responsible positions in major corporations, profit and non-profit, and positions in a variety of major and regional banks and other financial institutions.

For those students with a concentration in real estate, career opportunities are available in a wide array of firms. For example, a graduate may take a position with a real estate development firm, a financial institution or real estate investment firm, a real estate brokerage firm, a real estate management firm, or an appraisal firm. There are also a wide variety of job opportunities in the non-profit or governmental sector for a student with an expertise in real estate.

## Finance, Personal Financial Planning Concentration, B.S.B.A.

### B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Personal Financial Planning Concentration

Personal financial planning is the process of managing financial resources to achieve individual goals. It is a six-step process-determine current financial conditions, develop financial goals, identify alternative courses of action, evaluate alternatives, create and implement a financial plan, and evaluate and revise the plan. The basic elements of personal financial plan include cash flow/budgeting analysis, insurance needs, employee benefits, education funding requirements, investment decision, analysis of debt, portfolio analysis, retirement planning, forecasting retirement benefits and costs, income tax planning, and estate planning.

### Required (21 crs.)

- FIN 312 - Investments Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 421 - Personal Financial Planning Credits: 3
- FIN 322 - Estate Planning Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- FIN 333 - Applied Company and Security Analysis Credits: 3
- ACC 306 - Tax Accounting Credits: 3

## Personal Financial Planning Career Opportunities

The field of financial planning is experiencing substantial growth. The public's need for professional financial advice has been increasing drastically due to the changes in demographics and financial regulation. *U.S.News* and *World Report* lists personal financial planning as one of the 20 hot jobs for the 21st century. With a specialty in personal financial planning, you can choose a career within a full array of jobs. Typically, you can be a self-employed financial advisor or work for depository and non-depository financial institutions such as banks, saving institutions, credit unions, brokerage firms, investment companies, and insurance agencies. Alternative options include accounting firms, law offices, and human resource and employee benefit departments, among others. Current salaries are highly competitive and the current average income for experienced financial planners depends upon the specific career option

selected and the geographic region. U.S. Department of Labor reports the median annual earnings of personal financial advisors was \$56,680.

## **French with Secondary Certification, B.A.**

All courses required for the French major are taught in French. Courses numbered below French 200 do not count for the major. Professional Education courses offered by other departments are taught in English. This program is nationally recognized by ACTFL/NCATE.

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **Required (30 crs.)**

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3
- FRN 316 - Composition and Stylistics Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3
- FRN 340 - Genres Litteraires Credits: 3

### **French Electives (6 crs.)**

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

### **Note:**

French majors and minors are strongly urged to take history, political science, and geography courses that deal with French-speaking countries.

### **Required Professional Education Courses (30 crs.)**

**If planning to teach French**

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). If any exceptions are made, they must be approved by the Teacher Education Office. Other requirements for teacher certification are available from the Department of Modern Languages.

## Dual Certification French and Another Field

Students planning to teach will find it to their advantage to work for dual certification in two modern languages, a modern language and English, or a modern language and another field. To achieve dual certification a student must have the approval of both departments involved, complete the normal requirements for a major in the primary area of interest and a 30-hour sequence in the secondary area of specialization, plus appropriate courses in the methodology and student teaching in both areas.

## French, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**(36 crs.)**

All courses required for the French major are taught in French. Courses numbered below French 200 do not count for the major.

### Required French (30 crs.)

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3
- FRN 316 - Composition and Stylistics Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3

- FRN 340 - Genres Littéraires Credits: 3

## French Electives (6 crs.)

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

### Note:

French majors and minors are strongly urged to take history, political science, and geography courses that deal with French-speaking countries.

## General Science Certification

Students completing the requirements leading to certification as a secondary school teacher may elect to satisfy the requirements for additional certification in General Science by completing the following requirements:

### Biology (9 crs.)

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 145 - Environmental Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Chemistry (8 crs.)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

### Physics (9 crs.)

- PHY 108 - Astronomy Credits: 3
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 122 - Introductory Physics II - Lecture Credits: 3

### Mathematics (8 crs.)

- MAT 117 - Applied Statistics Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## Computer Science (3 crs.)

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- EDU 420 - Microcomputers in the Classroom Credits: 3

## Earth-Space Science (3 crs.)

- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3
- ESS 212 - Historical Geology Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3

## Geoenvironmental Studies, B.S.

### Geography-Earth Science (42 crs.)

#### Required Core Courses (15 crs.)

- ESS 210 - Physical Geology Credits: 3  
OR
- ESS 110 - Introduction to Geology Credits: 3  
AND
- ESS 212 - Historical Geology Credits: 3 *or*
- ESS 214 - Geology of National Parks Credits: 3 *or*
- GEO 306 - Geomorphology Credits: 3
- ESS 355 - Meteorology Credits: 3  
OR
- ESS 111 - Introduction to the Atmosphere Credits: 3  
AND
- ESS 404 - Applied Meteorology and Climatology Credits: 3 *or*
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 391 - Geography Seminar Credits: 3

#### Geography Electives (6 crs. min.)

- GEO 230 - Economic Geography Credits: 3

- GEO 244 - Land Use Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- GEO 308 - Geography of Latin America Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- GEO 320 - Historical Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

### Note:

\* Regional geography courses may also be counted as electives by advisement.

### Geoenvironmental Complex System Electives (9 crs. min.)

- ESS 404 - Applied Meteorology and Climatology Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- ESS 410 - Sedimentary Geology and Paleoenvironments Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- ESS 490 - Selected Topics in Earth Science Credits: 1-3
- GEO 301 - Introduction to Biogeography Credits: 3
- GEO 306 - Geomorphology Credits: 3
- GEO 402 - Medical Geography Credits: 3
- GEO 404 - Groundwater and Hydrogeology Credits: 3
- GEO 421 - Environmental Law Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 490 - Selected Topics in Geography Credits: 1-3
- GEO 491 - Selected Topics in Geography Credits: 3

### Technique Course Electives (6 crs. min.)

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 463 - Applied Geophysical Imaging Credits: 3

## Geoenvironmental Electives (3 crs. min.)

Any 200-400 level course listed in the above categories not previously taken may be used as a Geoenvironmental elective.

- GEO 203 - Climatology Credits: 3
- GEO 306 - Geomorphology Credits: 3
- GEO 397 - Introduction to Research Credits: 1-3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GEO 490 - Selected Topics in Geography Credits: 1-3
- ESS 212 - Historical Geology Credits: 3
- ESS 214 - Geology of National Parks Credits: 3
- ESS 220 - Oceanography Credits: 3
- Marine Science Consortium Course

## Internship Requirement:

Internship - 2.0 overall and major average required, junior status (60 cr.), must be taken before applying for an internship.

- GEO 360 - Internship in Geography I Credits: 3

## Allied Fields (22+ crs.)

## Biology (9-11 Credits by Advisement)

At least one course must be taken at or above 200 level

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 145 - Environmental Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 242 - Ecology Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

## Note:

BIO 162, BIO 145, BIO 242, and BIO 448 are strongly recommended. If student has a special interest in zoology or botany, they should follow sequential courses in that area, i.e., field zoology, field botany and plant taxonomy.

## Chemistry/Physics (7-8 Credits by Advisement)

- CHM 105 - An Observational Approach Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3



- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- PHY 121 - Introductory Physics I - Lecture Credits: 3
- PHY 123 - Physics I Laboratory Credits: 1

### Computer Science (3-4 Credits by Advisement)

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 104 - Programming in Python Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- CSC 191 - General Education Special Topics Credits: 3
- MIS 142 - Business Computer Systems Credits: 3

### Mathematics (3-4 credits by advisement)

- MAT 117 - Applied Statistics Credits: 3
- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4

## **Geography, Comprehensive Social Studies, B.S.Ed.**

### Required Courses in Geography (12 crs.)

- GEO 101 - World Geography Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 or
- ESS 111 - Introduction to the Atmosphere Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 140 - Cultural Geography Credits: 3

### Elective Courses in Geography (12 crs.)

Students majoring or concentrating in geography will select with advisement a minimum of four elective courses in geography. Electives should be chosen in the areas of specialization which either may serve a future teaching purpose or may establish a basis for future graduate study.

### Required Courses in Allied Social Studies (33 crs.)

#### Economics (6 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

## History (9 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

## Mathematics (3 crs.)

- MAT 117 - Applied Statistics Credits: 3

## Political Science (Government) (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS XXX - Political Science course by advisement

## Psychology (3 crs.)

- PSY 101 - General Psychology Credits: 3

## Cognate Field: (3 crs.)

One 200 level or above courses from one of the following areas: history, political science, or economics

## Required Professional Courses (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 412 - Teaching Social Studies in Secondary Schools I Credits: 3
- EDU 413 - Teaching of Social Studies II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3

## Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 1 additional math courses (except MAT 185 )

## Required Field Experience

See advisor

## **Geography, Geographic Information Systems Concentration, B.S.**

### **Geography, B.S.**

Land Use and Geographic Information Systems (GIS) concentrations. A 12-credit Geographic Information Systems (GIS) Certificate Program is also offered.

### **Geography (15 crs.)**

Core courses required for all concentrations-Land Use and GIS.

#### **Core courses (required):**

- GEO 105 - Physical Geography Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
  
- GEO 322 - Urban Geography Credits: 3 or
- GEO 244 - Land Use Credits: 3
  
- GEO 391 - Geography Seminar Credits: 3

### **Geographic Information Systems Concentration (24 crs.)**

#### **Required**

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 360 - Internship in Geography I Credits: 3  
*At least 3 credits of internship required*

#### **Select one:**

- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3

#### **Note:**

GEO 244 or GEO 322 if not taken in in Geography core.

Select two:

- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 463 - Applied Geophysical Imaging Credits: 3
- GEO 400-level Geography elective

Allied Courses (25 + crs.)

Select two:

- PHL 332 - Ethical Issues and Computer Technology Credits: 3
- PLS 231 - State and Local Government Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 431 - Pennsylvania Local Government Credits: 3
- SOC 220 - Social Stratification Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 363 - Population Problems Credits: 3

12+ crs.

- ART 217 - Computer Design I Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- MIS 142 - Business Computer Systems Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 355 - Database Applications Credits: 3
- CSCxxx by advisement

7+ crs.

- MAT 117 - Applied Statistics Credits: 3
- MAT 140A - College Algebra Credits: 4 or
- MAT 140B - College Algebra Credits: 3
- MAT 175 - Precalculus Credits: 3
- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4

Required:

- ENG 238 - Technical/Professional Writing I Credits: 3

## **Geography, Land Use Concentration, B.S.**

### **Geography, B.S.**

Land Use and Geographic Information Systems (GIS) concentrations. A 12-credit Geographic Information Systems (GIS) Certificate Program is also offered.

### **Geography (15 crs.)**

Core courses required for all concentrations-Land Use and GIS.

#### **Core courses (required):**

- GEO 105 - Physical Geography Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
  
- GEO 322 - Urban Geography Credits: 3 or
- GEO 244 - Land Use Credits: 3
  
- GEO 391 - Geography Seminar Credits: 3

### **Land Use Concentration (21 crs.)**

#### **Required**

- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 360 - Internship in Geography I Credits: 3  
*At least 3 credits of internship required*

#### **Select five of the following:**

- ESS 214 - Geology of National Parks Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 320 - Historical Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 339 - Remote Sensing Credits: 3

Note: GEO 244 or GEO 322 if not taken in in Geography core.

### **Allied Courses (15 crs.)**

## Political Science (6 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 431 - Pennsylvania Local Government Credits: 3
- PLS XXX - Political Science course by advisement

## Math-Computer Science (6 crs.)

### Required:

- MAT 117 - Applied Statistics Credits: 3

### Select one:

- CSC 103 - Overview of Computer Science Credits: 3
- CSC 180 - Microcomputer Basic Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1

## Psychology (3 crs.)

- PSY 105 - Research Design and Statistics for the Behavioral Sciences I Credits: 3 or
- GEO 441 - Quantitative Methods Credits: 3

## **History, B.A.**

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## History-Field of Specialization (36 crs.)

### Required (18 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

## Restricted Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

## Free Electives in History (6 crs.)

Only one course at the 200 level, and the rest at 300 level or above.

## Portfolio Requirement:

For assessment and career development purposes, all B.A. and B.S.Ed. majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

## History, Comprehensive Social Studies, B.S.Ed.

A 3.0 QPA will be required for entrance into the B.S.Ed. program and for matriculation to professional standing. The requirements for the B.S.Ed. include the completion of specific social studies, general education, and professional education courses. Where appropriate, these courses may also be used to fulfill general education categories.

## Required (57 crs.)

### History (30 crs.)

### Required (12 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

### Restricted Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### Free Electives (6 crs.)

- Only one course at the 200 level, and the rest at 300 level or above.

## Required Allied Social Studies (27 crs.)

## Political, Economic and Geographic Science (6 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- GEO 101 - World Geography Credits: 3

## Social and Behavior Science (6 crs.)

- PSY 101 - General Psychology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Social Studies Certification Requirements (15 crs.)

- GEO 103 - Geography of the United States and Canada Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Political Science Elective (3 cr.)

- PLS 141 - World Politics Credits: 3 or
- PLS 200 or 300 level

## Note:

PLS 200 or 300 level: suggested courses are PLS 231, PLS 251, PLS 300

## Social Science Electives (6 cr. - Choose Two)

- ANT 111 - Cultural Anthropology Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- INT 200 - Introduction to International Studies Credits: 3
- GEO 200 or 300 level
- Any PHL course

## Specific General Education Courses for Certification (12+ crs.)

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). The courses may also simultaneously count toward the fulfillment of general education requirements.

## Required Professional Education Courses (33 crs.)

### Required Course

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3



- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 412 - Teaching Social Studies in Secondary Schools I Credits: 3
- EDU 413 - Teaching of Social Studies II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

**Note:**

TCH 207 must be completed before EDU 412 and EDU 413

EDU 412 and EDU 413 must be taken simultaneously. A cumulative GPA of 3.0 is required to enroll in EDU 412 and EDU 413.

## Required Field Experience

Required: 50 Level I hours and PRAXIS I exam by the time one attains 75-90 credits. See B.S.Ed. advisor.

PRAXIS I & II are required for teacher certification.

## History, Public History Concentration, B.A.

**Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

42 crs.

### Required (18 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### Restricted Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### Public History Methods (6 crs.)

## Required

- HIS 319 - Introduction to Public History Credits: 3

## Select one: 3 crs.

- HIS 390 - Selected Topics in History Credits: 3
- HIS 413 - Pennsylvania History Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HIS 433 - Oral History Credits: 3
- HIS 460 - Archives and Public History Credits: 3
- HIS 490 - Selected Topics in History Credits: 1-3

## Required Internship (6 crs.)

- HIS 387 - History Internship Credits: 3
- HIS 389 - History Internship Credits: 3
- HIS 391 - History Internship Credits: 3-6

## Portfolio Requirement:

For assessment and career development purposes, all B.A. and B.S.Ed. majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

## **Human Communication Studies, B.A.**

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Required Courses (15 crs.)

- HCS 200 - Human Communication Theory Credits: 3
- HCS 210 - Public Speaking Credits: 3
- HCS 360 - Research Methods in Communication Credits: 3
- HCS 370 - Rhetorical Criticism Credits: 3
- HCS 400 - Senior Seminar Credits: 3

## Major Electives (21 crs.)

Students must take at least one course from each category (Rhetoric & Symbolism; Organizational Communication; Cultural Perspectives; and Interpersonal Communication) as well as an additional three classes from the course offerings and internship options below.

## Rhetoric and Symbolism

- HCS 325 - The Rhetoric of African-American Struggle and Progress Credits: 3
- HCS 345 - Environmental Communication Credits: 3
- HCS 352 - Argumentation & Debate Credits: 3
- HCS 356 - Persuasion Credits: 3
- HCS 363 - Political Rhetoric Credits: 3
- HCS 365 - Language and Meaning Credits: 3
- HCS 375 - Special Topics in Rhetoric and Symbolism Credits: 3

## Organizational Communication

- HCS 230 - Small Group Communication Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3
- HCS 350 - Theories of Organizational Communication Credits: 3
- HCS 351 - Special Topics Organizational Communication Credits: 3
- HCS 372 - Communication for Training and Instruction Credits: 3
- HCS 381 - Professional Communication and Multi-media Presentation Credits: 3

## Cultural Perspectives

- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- HCS 330 - Special Topics in Cultural Perspectives Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3

## Interpersonal Communication

- HCS 220 - Nonverbal Communication Credits: 3
- HCS 225 - Communication and Sport Credits: 3
- HCS 250 - Interpersonal Communication Credits: 3
- HCS 265 - Interviewing Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 349 - Special Topics in Interpersonal Communication Credits: 3
- HCS 385 - Resolving Conflict through Communication Credits: 3
- HCS 430 - Advanced Interpersonal Communication Credits: 3

## Internships

(Department Permission Required. Six credits of Internship may apply to major; three credits to Free Electives)

- HCS 390 - Internship I Credits: 3
- HCS 391 - Internship II Credits: 3

- HCS 392 - Internship III Credits: 3

## **Interdisciplinary Arts, B.A.**

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **Foundation Courses**

(which will also satisfy a General Education Category B (Humanities) requirement)

- IAP 111 - Introduction to Interdisciplinary Arts Credits: 3 (which will also satisfy a General Education Category B (Humanities) requirement)

### **One of the Following Courses:**

(which will also satisfy a General Education Category B: Literature requirement)

- ENG 243 - The Art of the Film Credits: 3
- ENG 250 - Introduction to Literature Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3

### **Three of the Following Courses:**

(One of these (except COM 111) will satisfy the General Education Category B: Humanities requirement, and the remaining two can be counted either as electives or in the primary or secondary concentrations of the curriculum track.)

- ART 101 - Art Appreciation Credits: 3
- COM 111 - Introduction to Mass Communication Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- THE 121 - Introduction to the Theatre Credits: 3

### **Curriculum Track (42 crs.)**

Interdisciplinary Arts majors choose a primary concentration consisting of 6 courses (18 crs.) and two secondary concentrations of 4 courses (each 12 crs.). The primary concentration and at least one of the secondary concentrations must be in the arts, although one of the secondary concentrations can be in a discipline outside of the arts.

An IA major wishing to concentrate in musical theatre, for example, might choose theatre as a primary concentration and music and dance as secondary concentrations; a student interested in art therapy might choose art as a primary concentration and psychology as one of the secondary concentrations; a student whose interest is in graphic fiction might combine courses in art, computer design, and creative writing; while a student interested in arts management could combine course work in two of the arts with courses in marketing and business. One of the most attractive features of the IA major is its flexibility, and the opportunity it offers students to design a curriculum suited to their personal interests and career goals. It also enables students to earn minors in their fields of concentration.

In the curriculum track, majors are also required to take one course in each of the following areas: A. History and Culture, B. Theory and Criticism, C. Arts Praxis, and D. Professional Skills. A list of the many courses offered by arts departments that satisfy this requirement is provided to majors, and with permission of the program director, courses in other colleges or departments, special topics courses, internships, or individualized instruction may also satisfy these category requirements.

## Senior Capstone (6 crs.)

- IAP 449 - Interdisciplinary Arts Senior Thesis Credits: 3
- IAP 451 - Interdisciplinary Arts Showcase Credits: 3 or
- IAP 452 - Interdisciplinary Arts Internship Credits: 3 or
- IAP 453 - Interdisciplinary Arts Internship Credits: 3

## International Studies, B.A.

Required courses INT 200 - Introduction to International Studies Credits: 3 and INT 300 - International Studies Seminar Credits: 3 introduce and reinforce knowledge of globalization and intercultural relations. Majors also are required to study abroad or engage in an off-campus internship that develops intercultural competency and international understanding.

Students must elect one Global Perspectives concentration (12 crs.) in:

1. Comparative & Global Cultures
2. Global Political Relations *or*
3. Global Business & Economics.

Global Perspectives courses explore globalization's impacts on the cultures, economies, and political systems of the world that cause international interdependency and tensions.

Students also must elect one Area Studies concentration (12 crs.) and related foreign language (9 crs.) in:

1. African & Middle Eastern Studies,
2. Asian Studies,
3. European Studies *or*
4. Latin American & Caribbean Studies.

Area Studies and Foreign Language courses promote intercultural and linguistic competency essential to successful cross-cultural personal and professional relationships.

Majors must take a minimum of 21 credit hours of major courses, including INT 200 and INT 300, at Shippensburg. Students declaring dual majors may double-count a maximum of 12 credit hours of courses between the first major and courses fulfilling International Studies Global Perspectives, Area Studies and Foreign Language requirements. Courses fulfilling general education requirements of both majors may be double-counted without restriction.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

**39 crs.**

## Required Courses (6 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- INT 300 - International Studies Seminar Credits: 3

### Note:

\*HON 399 - Honors: Independent Study Credits: 3 may serve as a substitute for INT 300 with an appropriate international topic, interdisciplinary research project, and permission of the director.

## Foreign Language Requirement (9 crs.)

Majors taking languages offered through Shippensburg University must complete 9 credit hours at the 200-level and higher. Students who study a language not offered through Shippensburg University--such as Korean, Russian or Swahili--are required to earn a total of 9 credit hours at the 100-level or higher. Language credits must be earned through Shippensburg University or with permission of the director another accredited institution of higher learning in the U.S. or abroad. Students are strongly encouraged to strengthen their qualifications for international employment by completing a modern language certificate (12 crs.) or minor (18 crs.).

## Study Abroad or Internship Requirement

Majors are required to study abroad or engage in an off-campus internship. The study abroad or internship experience must satisfy a minimum of 3 credit hours of the major's general education or course requirements. Students studying abroad at an approved program may take a maximum of 18 credit hours of major courses. Majors studying abroad to fulfill special academic needs may obtain exemptions from the minimum or maximum credit hour requirement with prior approval of the Director of International Studies.

## General Education Requirements (12 crs.)

**All majors must complete the following general education courses:**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
  
- ANT 111 - Cultural Anthropology Credits: 3 or
- GEO 140 - Cultural Geography Credits: 3

## Comparative and Global Culture and Global Political Relations

Majors with concentrations in Comparative and Global Culture and Global Political Relations must take these two Category D courses:

- GEO 101 - World Geography Credits: 3
- PLS 141 - World Politics Credits: 3

## Business and Economics Concentration

Majors with the Business and Economics Concentration must choose Category D courses from each of the following two choices:

- ECO 101 - Principles of Macroeconomics Credits: 3 or
- ECO 102 - Principles of Microeconomics Credits: 3 or
- ECO 113 - Principles of Economics Credits: 4
  
- GEO 101 - World Geography Credits: 3 or
- PLS 141 - World Politics Credits: 3

## Global Perspectives Concentration (12 crs.)

Students must choose one Global Perspectives Concentration. 6 credit hours should be at the 300-level or higher. Courses must be in at least 2 disciplines.

## Comparative and Global Cultures Concentration

- ANT 105 - Great Discoveries in Archaeology Credits: 3
- ANT 211 - Comparative Cultures Credits: 3
- ANT 220 - Anthropology for International Studies Credits: 3
- ANT 305 - Food, Drink and Culture Credits: 3
- ANT 310 - Magic, Science and Religion Credits: 3
- ANT 312 - Comparative Marriage and Family Credits: 3
- ANT 320 - Comparative Gender Roles Credits: 3
- ANT 350 - Medical Anthropology Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 233 - Art History III Credits: 3
- ENG 239 - Postcolonial Literature Credits: 3
- ENG 240 - Global Literature Credits: 3
- ENG 385 - Studies in Postcolonial Literature Credits: 3
- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HIS 407 - Women in Comparative Perspective Credits: 3
- INT 190 - General Education Special Topics Credits: 3
- INT 280 - Selected Topics in International Studies: Comparative & Global Cultures Credits: 3-6
- INT 380 - Selected Topics in International Studies Comparative & Global Cultures Credits: 3-6
- INT 390 - International Studies Internship - Comparative & Global Cultures Credits: 3-6
- MUS 261 - World Music Credits: 3
- PHL 295 - Comparative Religions Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 265 - Global Society Credits: 3
- SOC 421 - Impact of International Migration Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Global Political Relations Concentration

- CRJ 411 - Terrorism Credits: 3
- CRJ 463 - Comparative Criminal Justice Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 351 - World History since 1945 Credits: 3
- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- INT 281 - Selected Topics in International Studies: Global Political Relations Credits: 3-6
- INT 381 - Selected Topics in International Studies Global Political Relations Credits: 3-6
- INT 391 - International Studies Internship - Global Political Relations Credits: 3-6
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 349 - Applied Diplomacy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 394 - Selected Topics in International Politics Credits: 3
- SOC 365 - Elites in Society Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Global Business and Economics Concentration

- ECO 321 - International Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- GEO 230 - Economic Geography Credits: 3
- INT 282 - Selected Topics in International Studies Global Business & Economics Credits: 3-6
- INT 382 - Selected Topics in International Studies Global Business & Economics Credits: 3-6
- INT 392 - International Studies Internship - Global Business & Economics Credits: 3-6
- MGT 349 - International Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 470 - International Management Credits: 3
- MKT 360 - International Marketing Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

### Note:

\*\*Students taking FIN 425, MGT 349, and MKT 360 are required to elect a Business Minor-18 crs. in order to meet required prerequisites.

## Area Studies Concentration (12 crs)

Students must choose one Area Studies concentration. 6 credit hours should be at the 300-level or higher. Courses must be in at least two disciplines.



*\* Requires an appropriate topic and an Exception Form signed by Director of International Studies for approval.*

## African and Middle Eastern Studies Concentration

Arabic, French or another African or Middle Eastern language is required to fulfill the language requirement. Study abroad in Africa or the Middle East is highly recommended.

- \* ENG 385 - Studies in Postcolonial Literature Credits: 3
- FRN 150 - French Civilization Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 331 - Masterpieces of Francophone Literature Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HIS 339 - The Central Islamic Lands, 500-1700 Credits: 3
- HIS 344 - History of the Modern Middle East Credits: 3
- HIS 376 - History of Africa South of the Sahara Credits: 3
- INT 283 - Selected Topics in International Studies Africa & Middle East Studies Credits: 3-6
- INT 383 - Selected Topics in International Studies Africa & Middle East Studies Credits: 3-6
- INT 393 - International Studies Internship - African & Middle Eastern Studies Credits: 3-6

### Note:

ENG 385, GEO 415 and GEO 450 required approval of the Director

FRN 204 and FRN 331-Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the course listings for language prerequisites

## Asian Studies Concentration

An Asian language is required to fulfill the language requirement. Study abroad in Asia is highly recommended.

- \* ENG 385 - Studies in Postcolonial Literature Credits: 3
- GEO 313 - Geography of South and Southeast Asia Credits: 3
- GEO 317 - Geography of East Asia Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HCS 315 - Asian-American Communication Credits: 3
- HIS 350 - History of Modern Japan Credits: 3
- HIS 353 - Modern Southeast Asia Credits: 3
- HIS 354 - Traditional China Credits: 3
- HIS 355 - History of Modern China Credits: 3
- HIS 454 - China and the Outside World Credits: 3
- INT 284 - Selected Topics International Studies Asian Studies Credits: 3-6
- INT 384 - Selected Topics in International Studies Asian Studies Credits: 3-6
- INT 394 - International Studies Internship - Asian Studies Credits: 3-6
- PHL 336 - Concepts in Buddhism Credits: 3

## Note:

ENG 385, GEO 415 and GEO 450 require approval of the Director

## European Studies Concentration

French, German, Spanish or another continental European language is required to fulfill the requirement. Study abroad in Europe is highly recommended.

- ANT 351 - Peoples and Cultures of Europe Credits: 3
- ENG 236 - British Literature I Credits: 3
- ENG 237 - British Literature II Credits: 3
- ENG 318 - Studies in English Renaissance Literature Credits: 3
- \* ENG 337 - Romanticism Credits: 3
- ENG 349 - Victorian Literature Credits: 3
- ENG 376 - Studies in Medieval Literature Credits: 3
- \* ENG 377 - The Long 18th Century Credits: 3
- \* ENG 380 - 19th Century Literature Credits: 3
- FRN 150 - French Civilization Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 320 - French for the Professions Credits: 3
- FRN 330 - Masterpieces of French Literature Credits: 3
- FRN 340 - Genres Littéraires Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- GER 150 - German Civilization and Culture Credits: 3
- GER 151 - German Cinema Credits: 3
- GER 204 - Contemporary German Culture Credits: 3
- GER 215 - German for the Professions Credits: 3
- GER 320 - Berlin Credits: 3
- GER 322 - Readings in German Literature Credits: 3
- GER 400 - German Seminar Credits: 3
- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 325 - History of the Tsarist Russia Credits: 3
- HIS 326 - History of the U.S.S.R. Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3
- HIS 332 - English History: 1066 to Present Credits: 3
- HIS 334 - Europe 1715-1815: The Era of the Industrial and French Revolutions Credits: 3
- HIS 337 - History of the Byzantine Empire Credits: 3
- HIS 348 - The History of Ancient Rome Credits: 3
- HIS 356 - History of 19th Century Europe Credits: 3
- HIS 357 - History of Holocaust Credits: 3

- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- HIS 361 - History of 20th Century Europe Credits: 3
- HIS 362 - Europe 1450-1715: The Era of the Renaissance and Reformation Credits: 3
- HIS 423 - Issues in 20th-Century Europe Credits: 3
- INT 285 - Selected Topics in International Studies European Studies Credits: 3-6
- INT 385 - Selected Topics in International Studies European Studies Credits: 3-6
- INT 395 - International Studies Internship - European Studies Credits: 3-6
- MUS 320 - Masterpieces of Music Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 330 - Spanish for the Professions Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 385 - Aspectos De La Civilización Hispana Credits: 3
- SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature Credits: 3

## Note:

GEO 415 and GEO 450 require approval of the Director

FRN 204, FRN 320, FRN 330, FRN 340, FRN 380, FRN 392, FRN 400, GER 151, GER 215, GER 320, GER 322, GER 400, SPN 204, SPN 330, SPN 343, SPN 360, SPN 385, SPN 400-Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the Course Descriptions for language prerequisites

## Latin American and Caribbean Studies Concentration

Spanish, French, or another Latin American or Caribbean language is required to fulfill the language requirement. Study abroad in Latin America or the Caribbean is highly recommended.

- ANT 360 - Aztec and Maya Archaeology Credits: 1-3
- GEO 308 - Geography of Latin America Credits: 3
- \* GEO 415 - Regional Geographic Studies Credits: 3
- \* GEO 450 - Geography-Geology Field Studies Credits: 1-3
- HIS 349 - History of Latin America Credits: 3
- HIS 360 - History of Mexico Credits: 3
- HIS 366 - History of Brazil Credits: 3
- INT 286 - Selected Topics in International Studies Latin American & Caribbean Studies Credits: 3-6
- INT 386 - Selected Topics in International Studies Latin American & Caribbean Studies Credits: 3-6
- INT 396 - International Studies Internship - Latin American & Caribbean Studies Credits: 3-6
- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 349 - Applied Diplomacy Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3

- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 330 - Spanish for the Professions Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3
- SPN 385 - Aspectos De La Civilización Hispana Credits: 3
- SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature Credits: 3

### Note:

GEO 415 and GEO 450 require approval of the Director

SPN 204, SPN 330, SPN 361, SPN 385, SPN 400 -Only Modern Language courses that are not used to satisfy the B.A. language requirement or International Studies foreign language requirement may be counted toward the Area Studies Concentration requirement. See the Course Descriptions for language prerequisites.

## Management Information Systems, B.S.B.A.

Effective information is an integral part of any successful organization. The development and administration of an effective information system requires competency in both technological skills and business knowledge. As such, management information systems professionals utilize tools, techniques, and concepts of various disciplines such as computer science, management science, and organizational behavior. These interdisciplinary tools, combined with an understanding of the basic needs of an organization, enable the information system professionals to apply computer technology to solve a wide range of business problems. Management information systems (MIS) professionals frequently interact with individuals in many functional areas of an organization to analyze information needs and requirements and to serve as a liaison with computer systems personnel.

### B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3

- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (18 crs.)

- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 340 - Business Programming Credits: 3
- MIS 344 - Business Systems Analysis and Design Credits: 3
- MIS 355 - Database Applications Credits: 3
- MIS 420 - Telecommunications and Distributed Processing Credits: 3
- MIS 446 - Applied Project Management Credits: 3

### Optional Electives

- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 399 - Introduction to Corporate Cybersecurity Credits: 3
- MIS 442 - Electronic Commerce and Technology Integration Credits: 3
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 106 - Computer Science I - Lab Credits: 1

## MIS Career Opportunities

Career positions appropriate for an MIS graduate include systems analysts, database administrator, network specialist, web designer, software engineer, programmer/analyst, project manager, and technical trainer. Successful MIS professionals can advance to senior management and executive-level positions such as information systems manager,

chief information officer, and chief executive officer. Those with work experience and considerable expertise may find lucrative opportunities as independent consultants, or may choose to start their own firms.

The Department of Labor predicts that management information systems-related jobs are expected to grow much faster than the average for all occupations between 2008 and 2018. Demand for MIS professionals stays strong in the foreseeable future as organizations continue to adopt and integrate increasingly sophisticated technologies into their business activities. In addition, various studies find MIS graduates among the highest paid college graduates.

## **Entrepreneurship, B.S.B.A**

The Entrepreneurship program is focused on opportunity identification, enhancement, and realization to create value for all stakeholders. The point of view for all entrepreneurship ventures is the "owner," but it has evolved to include companies and organizations of all types and stages. The skills a student learns through an entrepreneurship major are vital for the success of any business--large or small, public or private, corporate or not-for profit, local or global. The major conveys a broad skill-set for business, while it also provides students with customized paths for success in specific business systems including new ventures, franchises, corporate ventures, socially responsible companies, and family-controlled enterprises.

### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

#### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

#### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

## Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (15 crs.)

- ENT 336 - Product Design & Development Credits: 3
- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 431 - Corporate Entrepreneurship Credits: 3
- ENT 432 - Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3

## Electives (3 crs.)

(One course from the following 3-credit courses)

- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 450 - Negotiation Credits: 3
- MGT 470 - International Management Credits: 3
- MGT 490 - Selected Topics in Management Credits: 1-3
- MGT 498 - Strategy Implementation Credits: 3
- MKT 370 - Services Marketing Credits: 3
- MKT 430 - Marketing Research Credits: 3

## Entrepreneurship Career Opportunities

Entrepreneurship is what powers the economy, and students develop the skills and contacts necessary to make ideas real. An entrepreneurship major from Shippensburg University will prepare students for any one of the following career tracks: corporate entrepreneurship, also known as intrapreneurship, where our graduates develop new operations or products for existing corporations; independent entrepreneurship, where our graduates start their own for-profit firms; family business, where our graduates go into the family firm as new or future management; and social entrepreneurship, where our graduates start new or develop existing not-for-profit or community service oriented firms.

More specifically, when company recruiting ads use words like leading-edge or talk about developing new products or markets, they are talking about corporate entrepreneurship. When government and civic organizations talk about becoming more innovative and proactive, they are building on the growing social entrepreneurship movement. As always, if you have an idea of your own, for a product, a service, or just a way of life for yourself, there is no alternative to going independent. For any of these goals, an entrepreneurship major from Shippensburg University can get you where you want to be.

## **Management, Human Resources Management Concentration, B.S.B.A.**

The human resource management concentration covers the fields of personnel management, industrial relations, and training. The program is designed to provide students with a solid understanding of the wide range of opportunities in the field. The courses emphasize both the theoretical aspects and the practical skills needed for success in the field. By careful selection of elective courses, students can design a program to suit their individual career interests.

### **B.S.B.A. Core Requirements**

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

#### **Required Courses in Related Fields**

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

#### **Required Courses in the John L. Grove College of Business**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

**Note:**



- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (12 crs.)

- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 346 - Human Resource Management Law Credits: 3
- MGT 348 - Compensation Administration Credits: 3

### Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 431 - Corporate Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- FIN 324 - Retirement Planning and Employee Benefits Credits: 3
- MGT 349 - International Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 450 - Negotiation Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3

## Human Resource Management Career Opportunities

The Department of Labor continues to project a strong demand for entry-level jobs in the human resource management field. Human resource management is among the top paying fields. Graduates of the program are prepared to begin their careers in the human resource management departments of corporations or government agencies as trainees, recruiters, compensation specialists, job analysts, grievance counselors, and arbitration managers. The program provides a solid foundation for graduate study in the fields of personnel, industrial relations, human resource management, and organizational development.

## **Management, International Management Concentration, B.S.B.A.**

Firms, large and small, have the opportunity to participate in worldwide business ventures, whether through exporting, importing, international trade, or by manufacturing or setting up service operations overseas. The firms also face the challenges of competition from foreign companies.

The international management concentration provides students with a better grasp of the opportunities and challenges, and facilitates functioning in an international environment. The program provides exposure to the cultures of various countries, development of competence in at least one foreign language, and training in a broad range of management and business theories and skills relevant to international operations.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (12 crs.)

- MGT 340 - Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 470 - International Management Credits: 3
- MKT 360 - International Marketing Credits: 3

### Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ANT 220 - Anthropology for International Studies Credits: 3
- ECO 321 - International Economics Credits: 3
- FIN 425 - Global Financial Management Credits: 3
- GEO 101 - World Geography Credits: 3
- MGT 349 - International Human Resource Management Credits: 3
- PLS 141 - World Politics Credits: 3

#### Note:

Only one of ANT 220, GEO 101, or PLS 141 may be counted as a major elective course.

### International Management Language Requirement (12 crs.)

Twelve credits in one modern language beyond the beginning level (other than one of the literature courses) shall be elected by the student. All four courses must be taught in the selected language. At least one commercial course (e.g., FRN 320, GER 215, SPN 330) shall be among the four courses selected by the student. Students in International Management must achieve an intermediate level on the ACTFL (American Council on the Teaching of Foreign Languages) Oral Proficiency Interview. The competency examination must be completed no later than the middle of their senior year (105 credits).

### International Management Career Opportunities

The program prepares students for job opportunities in government agencies, multinational corporations, or firms of all sizes with international operations. The program also provides a solid foundation for the pursuit of graduate study.

## **Management, Management Concentration, B.S.B.A.**

The Management program provides the student with a broad understanding of a variety of systematic business practices, techniques and philosophies. The program stresses the mastery of key managerial concepts from the

perspective of how they affect the behavior, performance and satisfaction of individuals and how individual performance and satisfaction contribute to organizational efficiency and effectiveness. Special attention is devoted to the necessity of adapting to environmental conditions and the implementation of corporate strategic objectives.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (15 crs.)

- ENT 431 - Corporate Entrepreneurship Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 498 - Strategy Implementation Credits: 3

## Electives (3 crs.)

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 432 - Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 450 - Negotiation Credits: 3
- MGT 470 - International Management Credits: 3
- MGT 490 - Selected Topics in Management Credits: 1-3

## Management Career Opportunities

Completion of the management program facilitates employment potential in both manufacturing and service firms. Industrial and retail sales positions, with a career orientation toward sales management, are also likely. The program also provides a solid foundation for graduate study.

## Marketing, B.S.B.A.

The marketing program is designed to provide students with the tools necessary to implement marketing strategies and policies. The program provides an optimum balance between theory and practice. Due to the designed flexibility of the program, students have the opportunity to tailor a marketing program of study to best fit their individual career interests.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3

- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

### Required (9 crs.)

- MKT 306 - Buyer Behavior Credits: 3
- MKT 430 - Marketing Research Credits: 3
- MKT 495 - Marketing Analysis and Strategy Development Credits: 3

### Electives (9 crs.)

Three courses from the following 3 credit courses:

- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 315 - Sales Management Credits: 3
- MKT 325 - Advertising and Promotional Strategy Credits: 3
- MKT 335 - E-Marketing Credits: 3
- MKT 340 - Tourism and Events Planning Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 352 - Principles of Retailing Credits: 3
- MKT 360 - International Marketing Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- MKT 380 - Sports Marketing Credits: 3
- MKT 390 - Selected Topics in Marketing Credits: 1-3
- MKT 490 - Selected Topics in Marketing Credits: 1-3

## Marketing Career Opportunities

Marketers are in demand as the field of marketing is pervasive in our society. It is a critical function in all organizations. Examples of fields seeking marketing professionals are: e-business, advertising, business-to-business marketing, consulting, international marketing, marketing research, retail management, sales and sales management, supply chain management, and transportation. Shippensburg marketing graduates are sought regularly by employers and they are also well prepared for further pursuit of their educations at top graduate schools across the nation.

## Mathematics, Applied Math Concentration, B.S.

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

## Concentrations

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

## Allied Electives

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

## Required Mathematics (30 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

## Required Computer Science (3-4 crs.)

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1  
( CSC 106 can be taken in place of CSC 107 )

## Applied Math Concentration (24-27 crs.)

- MAT 322 - Differential Equations Credits: 3
- MAT 326 - Mathematical Modeling Credits: 3

## One of

- MAT 410 - Numerical Analysis Credits: 3
- MAT 422 - Partial Differential Equations Credits: 3
- MAT 476 - Probability Credits: 3
- MAT 491 - Topics in Applied Mathematics Credits: 3

## Applied Math Elective:

- MAT 3xx/4xx elective
- MAT 4xx elective
- Three Allied Electives \*\*

## Note:

\*\*Allied Electives may be replaced by a minor/second major in any discipline



## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## Mathematics, B.S.

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

## Concentrations

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

## Allied Electives

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

## Required Mathematics (30 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

## Required Computer Science (3-4 crs.)

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1  
(CSC 106 can be taken in place of CSC 107)

## B.S. without concentration (24 - 27 crs.)

- MAT3xx or 4xx elective
- MAT3xx or 4xx elective
- MAT3xx or 4xx elective
- MAT4xx elective
- MAT4xx elective
- Three-Allied-Electives

Three Allied Electives may be replaced by a minor/second major in any discipline.

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## **Mathematics, Secondary Education Certification, B.S.**

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

### **Concentrations**

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

### **Allied Electives**

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

### **Required Mathematics (30 crs.)**

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

### **Required Computer Science (3-4 crs.)**

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or

- CSC 110 - Computer Science I - Lecture Credits: 3  
and
- CSC 106 - Computer Science I - Lab Credits: 1 CSC 106 can be taken in place of CSC 107 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Secondary Education Certification (45 crs.)

- MAT 326 - Mathematical Modeling Credits: 3
- MAT 333 - Geometry Credits: 3
- MAT 400 - History of Mathematics Credits: 3
- MAT 4xx - elective

## Professional Sequence

- RDG 413 - Teaching Reading to English Language Learners Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 371 - Technology in the Mathematics Classroom Credits: 3
- EDU 434 - Teaching of Mathematics in the Secondary Schools I Credits: 3
- EDU 435 - Teaching of Mathematics in the Secondary Schools II Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

## Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4

- Three General Education courses

## **Mathematics, Statistics Concentration, B.S.**

The B.S. degree is designed to give the student a broad knowledge of mathematics as well as a firm grasp on the application of mathematics to other disciplines. The most typical applications include computer science, statistics, actuarial science, physical and biological sciences, and teacher certification at the secondary level. Students take a significant number of upper level courses outside the mathematics department to strengthen their knowledge in one or more application disciplines.

To complete the degree a student must take all of the core courses and complete either a concentration or a general program of study which includes at least five courses at the 300 level or above of which at least two are at the 400 level along with either a minor, a major, or three allied electives.

### **Concentrations**

Currently there are three pre-approved concentrations: applied math, secondary education certification, and statistics. The concentrations allow for a student to complete either a minor or second major in a related discipline or a series of allied electives to explore how mathematics can be applied to other disciplines.

### **Allied Electives**

In general, allied electives are courses numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE. Other courses will be considered by the department chair on a case-by-case basis. Students not in the Secondary Certification concentration must complete three allied electives, at least one of which must be from disciplines other than MAT. This requirement is waived for students completing a minor or second major.

### **Required Mathematics (30 crs.)**

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3 or
- MAT 441 - Real Analysis I Credits: 3

### **Required Computer Science (3-4 crs.)**

- CSC 104 - Programming in Python Credits: 3 or
- CSC 180 - Microcomputer Basic Credits: 3 or
- CSC 110 - Computer Science I - Lecture Credits: 3  
and

- CSC 106 - Computer Science I - Lab Credits: 1 or can be taken in place of CSC 107 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Statistics Concentration (24-27 crs.)

- MAT 317 - Statistics II Credits: 3
- MAT 476 - Probability Credits: 3
- MAT 486 - Mathematical Statistics Credits: 3
- MAT 3xx/4xx Elective
- MAT 3xx/4xx Elective
- Three Allied Electives

### Note:

Allied Electives may be replaced by a minor/second major in any discipline

## Course Sequencing

The department maintains a suggested sequence for scheduling the required core math courses and the courses required by the various concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list is available in the department office.

A typical first year sequence for all mathematics majors is given below:

### Semester I

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4

### Semester II

- MAT 212 - Calculus II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Three General Education courses

## **Physics, Advanced Physics Concentration, B.S.**

General Education requirements (36 crs. see note\* at the end of the Core Curriculum description)

### Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

## Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

## Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

## Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## Additional courses (29 crs.)

### Chemistry (4 crs.)

- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

### Physics (25 crs.)

- PHY 411 - Quantum II Credits: 3
- PHY 421 - Electricity and Magnetism II Credits: 3
- PHY 431 - Mechanics II Credits: 3
- PHY 397 - Intro to Research Credits: 3
- PHY 398 - Research II Credits: 3
- PHY 3XX/4xx: Four 300- or 400-level Electives

# Physics, B.S.

The Physics B.S. offers the following concentrations:

1. *Advanced Physics*: Designed for students planning to go on to graduate school in physics. The concentration provides a solid and rigorous grounding in physics and will prepare the students well for the advanced physics GRE test, as well as graduate school studies.
2. *Computational*: Offers a solid grounding in physics through the physics core, and develops computational skills applicable to all scientific fields. These skills are developed through a computational physics course and courses in computer science. Students following this concentration can also complete a minor in computer science by taking one extra computer science course after fulfilling the concentration requirements. This concentration prepares students well for the job market by offering applicable skills as well as experience through its project or internship requirement.

120 crs.

General Education requirements (36 crs.)

Physics Core (55 crs.)

Additional courses (29 crs.)

Physics electives\*\*9 cr (at least 3 courses at or above 300 level)

General electives

20 hours of general electives including at least 12 hours at the 300 level or higher. A minor in another discipline is strongly encouraged. See note at the end of the Core Curriculum description.

Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4



## Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

### Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## **Physics, B.S.Ed.**

The Physics B.S.Ed. program leads to a teaching certification in Physics at the secondary education level.

## Degree Requirements. (131 crs.)

### General Education requirements (33 crs.)

Note: Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 )

### Physics Core (55 crs.)

All degrees require the successful completion of the Physics Core

### Additional courses (43 crs.)

#### Physics (3 crs.)

- PHY 4XX - 400 level Physics elective

#### Biology (4 crs.)

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

## Earth-Space Sciences (3 crs.)

- ESS 110 - Introduction to Geology Credits: 3 or
- ESS 210 - Physical Geology Credits: 3

## Professional Education Requirements (33 crs.)

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- EDU 440 - Teaching of Science in Secondary Schools Credits: 3
- EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 413 - Teaching Reading to English Language Learners Credits: 3

### Note:

See note at the end of the Core Curriculum description. BIO 162 also meets a General Education Category C requirement.

## **Physics, Computational Physics Concentration, B.S.**

General Education requirements (36 crs. see note\* at the end of the Core Curriculum description above)

## Physics Core Courses

55 crs.

All degrees require the successful completion of the Physics Core, which consists of the following courses:

### Courses in Physics (32 crs.)

- PHY 107 - 1st Year Seminar for Physics Majors Credits: 2
- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4
- PHY 341 - Classical and Statistical Thermodynamics Credits: 4

### Courses in allied fields (23 hrs.)

- MAT 211 - Calculus I Credits: 4

- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 322 - Differential Equations Credits: 3
- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
  
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 106 - Computer Science I - Lab Credits: 1
- OR
- ENGR 120 - Programming for Engineers Credits: 3

### Note:

PHY 221, MAT 211, MAT 212, and CHM 121 satisfy general education requirements as well, for Skills (MAT 211), Category A (MAT 212), and Category C (PHY 221 and CHM 121), leaving a general education required curriculum of: 48 crs.-12 crs. = 36 crs.

## Additional courses (29 crs.)

### Math (6 crs.)

- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 410 - Numerical Analysis Credits: 3

### Computer Science (12 crs.)

- CSC 111 - Computer Science II Credits: 4
  
- CMPE 220 - Computer Organization Credits: 4 or
- CSC 371 - Database Management Systems Credits: 4
  
- CMPE 322 - Microcontrollers & Interfaces Credits: 4

### Physics

Two physics courses at 300 or 400 level (7 cr)

- PHY 471 - Computational Physics Credits: 4
- PHY 3XX or 4XX: 300- or 400-level Physics Elective
- PHY 3XX or 4XX: 300- or 400-level Physics Elective

## **Political Science, B.A**

### Political Science (39 crs.)

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## General Track Required (21 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 399 - Senior Seminar Credits: 3

### Note:

Students must earn a C or better in each required core course.

In addition to the required core, students need to take courses in four applied competency areas. To meet this requirement students need between 9 and 15 credits; the number of credits depends on whether a course counts for more than one applied competency.

## Applied Competencies

### Applied Competency: Oral Communication (3 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

### Applied Competency: Written Communication (3 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 312 - The American Presidency Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 351 - European Politics Credits: 3

- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3

### Applied Competency: Problem Solving (3 crs.)

- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

### Applied Competency: Experiential Learning (6 crs.)

- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 313 - The Judicial Process Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 395 - Internship I Credits: 3
- Any Study Abroad course in any discipline.

### Departmental Electives (3-9 crs.)

Any Political Science course(s).

A student can count a maximum of six internship credits toward the major. Additional internship credit hours can be used as credits applied toward graduation.

## General Education

Students are strongly encouraged to take the following General Education courses:

- MAT 117 - Applied Statistics Credits: 3 (Category A or Required Skills)
- ECO 101 - Principles of Macroeconomics Credits: 3 (Category D) or
- ECO 102 - Principles of Microeconomics Credits: 3 (Category D) or
- ECO 113 - Principles of Economics Credits: 4 (Category D)
- GEO 101 - World Geography Credits: 3 (Category D) or
- GEO 103 - Geography of the United States and Canada Credits: 3 (Category D)
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 (Category E)

## Political Science, International Concentration, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

## Political Science - International Track (39 crs.)

### International Track Required (24 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 399 - Senior Seminar Credits: 3

### Note:

Students must earn a C or better in each required core course.

In addition to the required core, students need to take courses in four applied competency areas. To meet this requirement students need between 9 and 15 credits; the number of credits depends on whether a course counts for more than one applied competency.

## Applied Competencies

Applied Competency: Oral Communication (3 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

### Applied Competency: Written Communication (3 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 312 - The American Presidency Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3

### Applied Competency: Problem Solving (3 crs.)

- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 325 - African American Politics Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

### Applied Competency: Experiential Learning (6 crs.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 313 - The Judicial Process Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 395 - Internship I Credits: 3
- Any Study Abroad course in any discipline.

## International Track Electives (12 crs.)

(Note: These courses are also used to satisfy the Applied Competencies.)

- PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3
- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 343 - Global Economic and Political Conflict Credits: 3
- PLS 347 - Applied Diplomacy Credits: 3
- PLS 348 - Applied Diplomacy Credits: 3
- PLS 351 - European Politics Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 359 - European Political Integration and Identity Credits: 3
- PLS 394 - Selected Topics in International Politics Credits: 3

## Departmental Electives (0-3 crs.)

Any Political Science course.

A student can count a maximum of six internship credits toward the major. Additional internship credit hours can be used as credits applied toward graduation.

## General Education

Students are strongly encouraged to take the following General Education courses:

- MAT 117 - Applied Statistics Credits: 3 (Category A or Core)
- ECO 101 - Principles of Macroeconomics Credits: 3 (Category D) or
- ECO 102 - Principles of Microeconomics Credits: 3 (Category D) or
- ECO 113 - Principles of Economics Credits: 4 (Category D)
- GEO 101 - World Geography Credits: 3 (Category D)



- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3 (Category E)

## **Psychology, B.A.**

### **Note:**

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

### **Core Courses (27 crs.)**

#### **Developmental**

Choose 1 from the following:

- PSY 265 - Childhood and Adolescence Credits: 3
- PSY 352 - Adulthood and Aging Credits: 3

#### **Social/Personality**

Choose from 1 of the following:

- PSY 240 - Psychology of Personality Credits: 3
- PSY 270 - Social Psychology Credits: 3

#### **Abnormal**

Choose 1 of the following:

- PSY 330 - Abnormal Psychology Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3

#### **Neuroscience**

Choose 1 of the following:

- PSY 320 - Behavioral Neuroscience Credits: 3
- PSY 323 - Sensation and Perception Credits: 3

#### **Learning/Behavioral**

Choose 1 of the following:

- PSY 235 - Conditioning and Learning Credits: 3
- PSY 383 - Children's Understanding of Their Social World Credits: 3

## Cognition/S&P

Choose 1 of the following:

- PSY 323 - Sensation and Perception Credits: 3
- PSY 325 - Psychology of Human Cognition Credits: 3

## Methods

Complete all 3 of the following:

- PSY 105 - Research Design and Statistics for the Behavioral Sciences I Credits: 3
- PSY 205 - Research Design and Statistics for the Behavioral Sciences II Credits: 3
- PSY 301 - Experimental Psychology Credits: 3

## Electives (12 crs.)

Select at least 2 from each category:

### Ethical & Social Responsibility in a Diverse World

- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3
- PSY 350 - Psychology of Sustainability Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- PSY 470 - Legal Psychology Credits: 3

### Professional Development

- PSY 311 - Applied Behavior Analysis Credits: 3
- PSY 335 - Psychology of Social Influence Credits: 3
- PSY 340 - Introduction to Clinical Psychology Credits: 3
- PSY 361 - Psychology of Group Interaction Credits: 3
- PSY 384 - Psychology of Person-to-Person Interaction Credits: 3
- PSY 432 - The Psychology of Computers and the Internet Credits: 3
- PSY 435 - Psychopharmacology Credits: 3
- PSY 445 - Psychology of Thinking Credits: 3
- PSY 450 - Crisis Intervention Credits: 3
- PSY 475 - Industrial and Organizational Psychology Credits: 3
- PSY 485 - Tests and Measurements Credits: 3

## Capstone (3 crs.)

Choose 1 of the following:

- PSY 374 - Advanced Research in Psychology I Credits: 3
- PSY 375 - Advanced Research in Psychology II Credits: 3
- PSY 379 - Capstone Seminar in Psychology Credits: 3
- PSY 385 - Internship in Psychology Credits: 1-4
- PSY 386 - Internship in Psychology Credits: 3
- PSY 389 - Internship in Psychology III Credits: 3
- PSY 440 - History and Systems of Psychology Credits: 3

## **Public Administration, B.S.**

(45 crs)

Required (30 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 202 - Applications in Public Affairs Credits: 3
- PLS 231 - State and Local Government Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 373 - Public Financial Administration Credits: 3

Note:

Students must earn a C or better in each required core course.

Public Administration Electives (6 crs.)

- PLS 307 - Applied Research in Political Science Credits: 1-3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 333 - Applications in State and Local Public Policy Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- PLS 381 - Principles of Labor Relations Credits: 3
- PLS 389 - Selected Topics in Public Administration Credits: 3
- PLS 395 - Internship I Credits: 3
- PLS 396 - Internship II Credits: 3
- PLS 397 - Internship III Credits: 3-6
- PLS 431 - Pennsylvania Local Government Credits: 3

Note:

Internship - The department strongly encourages students to complete an internship. To qualify for an internship, a student must have a 2.0 overall QPA and a 2.3 QPA in the public administration major. Students must have completed the following courses to be eligible for an internship: PLS 100, PLS 201, PLS 231, PLS 271, PLS 300, and PLS 301. A student can count a maximum of six internship credits toward the major.

## Electives (3) - Any Political Science course

## Allied Fields (6 crs.) 16 crs. total ---Includes 6 crs. beyond General Education Requirements

Student majoring in public administration must also take the following courses in the allied fields. Three of these courses satisfy General Education requirements.

### Economics (6 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3 or
- ECO 113 - Principles of Economics Credits: 4
- ECO - Any Economics course at or above 200 level

### Sociology (6 crs.)

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

And an additional sociology course from the following:

- SOC 243 - Minority Groups Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3
- SOC 363 - Population Problems Credits: 3
- SOC 365 - Elites in Society Credits: 3

### Mathematics (4 crs.)

- MAT 117 - Applied Statistics Credits: 3

## **Social Work, B.S.W.**

The baccalaureate social work degree is the first level of professional education for entry into the social work profession. Thus, the goal of our social work program is to build on the liberal arts perspective and integrate the knowledge, values, and skills for competent generalist entry-level practice. The program curriculum is designed around core competencies and practice behaviors.

The program operates as a community. We have a student resource room and student organizations which provide a wide variety of extracurricular opportunities. For example: volunteer work, programs about practice opportunities, social activities, trips to state and national conferences, and networking.

## Academic Advisement

Students are encouraged to work with their advisors throughout their educational process. The faculty offer extended advising and support. Regular review of students' progress is completed by the faculty during the professional development review which is conducted each semester.

## Career Opportunities

Upon graduation, an entry-level generalist social worker will possess the professional judgment and proficiency to apply differentially, with supervision, the common professional foundation to serve people in systems of various sizes and types. Social work offers many career opportunities in diverse fields such as health, child welfare and domestic violence, aging, developmental disabilities, substance abuse, and behavioral health to name a few. A graduate will have special skills for delivering services to clients, which include the development and provision of resources on client's behalf through organizational and community work. The graduate will be prepared with a breadth and depth of analytical and interactional skills for beginning work with individuals, families, groups, organizations, and communities. The program's objective is to prepare students in these learning areas at a level that maintains accreditation by the Council on Social Work Education (CSWE) and is evaluated by employers and graduate programs as an excellent foundation for both entry-level practice and future career development. This task requires a program and curriculum designed to enable each student to develop the values, knowledge and self-awareness skills as reflected in our stated educational competencies.

## Required Courses (55 crs.)

*\* Students must earn a C or higher in Social Work courses in order for them to count as prerequisites and towards program completion. All courses are 3 credits unless otherwise specified.*

- SWK 102 - Social Work in Social Welfare Credits: 3
- SWK 150 - Human Relations Lab Credits: 3
- SWK 250 - Assessing Individuals in the Social Environment Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 270 - Social Work Practice with Individuals Credits: 3
- SWK 375 - Social Work Skills for Working with Groups Credits: 3
- SWK 327 - Social Work Practice with Families Credits: 3
- SWK 340 - Assessing Organizations and Communities in Society Credits: 3
- SWK 360 - Research Techniques for Social Workers Credits: 3
- SWK 370 - Social Work Practice with Organizations and Communities Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3
- SWK 388 - Preparation for Practicum Credits: 1
- SWK 462 - Seminar in Social Work Methods Credits: 3 \*\*
- SWK 460 - Field Work in Social Work I Credits: 6 \*\*
- SWK 461 - Field Work in Social Work II Credits: 6 \*\*

## Note:

*\*Note: During this course students must apply for professional standing, students who transfer in this course must apply during their first semester. These procedures and criteria are described in the student handbook.*

*\*\*Note: Field work in social work and the Seminar in Social Work Methods are taken for 15 credit hours with no additional course work during the last semester in the senior year. Students must have earned a C or better in all required social work courses and full faculty approval before they are eligible for field work and Seminar in Social Work Methods.*

## Social Work Electives (3 crs.)

One of the following courses is required:

- SWK 262 - Social Work Elective: Introduction to Child Welfare Practice Credits: 3
- SWK 347 - Special Fields of Social Work: Behavioral Health Credits: 3
- SWK 348 - Special Fields of Social Work: Substance Abuse Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 357 - Special Fields of Social Work: Health Care Credits: 3
- SWK 358 - Special Fields of Social Work: Schools Credits: 3
- SWK 359 - Social Work Elective: Violence in Interpersonal Relationships Credits: 3
- SWK 383 - Selected Topics in Social Welfare Credits: 1-3
- SWK 490 - Selected Topics in Social Welfare Credits: 1-3

## Allied Fields (15-16 crs.)

Students majoring in social work must take the following courses in allied fields which may also meet general education requirements.

- PSY 101 - General Psychology Credits: 3
- BIO 150 - Human Biology Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3
- MAT 117 - Applied Statistics Credits: 3

## Sociology, B.A.

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

(36 crs.)

Required (21 crs.)

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3
- SOC 201 - Sociological Practice Credits: 3
- SOC 220 - Social Stratification Credits: 3
- SOC 380 - Classical Social Theory Credits: 3
- SOC 385 - Introduction to Social Research Credits: 3
- SOC 386 - Data Collection and Analysis Credits: 3
- SOC 415 - Senior Seminar Credits: 3

### Note:

Students must earn a C or better in each required core course. Students who receive a D or F in these classes may repeat them in accordance with university policy.

## Sociology Electives - 15 crs.

This may include an internship in sociology, which is highly recommended.

## Allied Fields

Arts and sciences students majoring in sociology must take the following courses in allied fields. All of these may be taken as general education.

- ANT 111 - Cultural Anthropology Credits: 3
- MAT 117 - Applied Statistics Credits: 3
- ECO - Economics elective
- Sequence in Political Science
- GEO - Geography elective
- PHL - Philosophy elective
- PSY 101 - General Psychology Credits: 3

## Free Electives

Free electives are to be taken in appropriate fields with advisement. They may be utilized to pursue various special interest areas in sociology (see below) or to develop the equivalent of a minor or a second concentration. Language or research tools may be alternative recommendations.

Internships in sociology are highly recommended and may be taken for a total of 9 credits of which 6 credits can be applied to the major.

Sociology courses may be grouped into special interest areas to give students more depth in a particular subfield of sociology. Courses taken as part of the general education and allied fields requirements may also reinforce particular interest groupings within sociology. Possible special interest areas and examples of supporting courses follow:

## Cross Cultural Anthropology

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 211 - Comparative Cultures Credits: 3
- ANT 312 - Comparative Marriage and Family Credits: 3

- ANT 351 - Peoples and Cultures of Europe Credits: 3

## Archaeology

- ANT 150 - Introduction to Archaeology Credits: 3
- ANT 330 - Mammoth Hunters and Moundbuilders Credits: 3
- ANT 360 - Aztec and Maya Archaeology Credits: 1-3

## Culture and Social Change

- SOC 370 - Sociology of the Arts Credits: 3
- SOC 375 - Sociology of Media & Culture Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3

## Family and Marriage

- SOC 363 - Population Problems Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 410 - Family and Society Credits: 3

## Social Problems

- SOC 244 - Criminology Credits: 3
- SOC 245 - Juvenile Delinquency Credits: 3
- SOC 363 - Population Problems Credits: 3

## Gerontology

- SOC 371 - Social Dynamics of Aging Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 369 - Medical Sociology Credits: 3

## Human Relations

- SOC 243 - Minority Groups Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3

## Social Institutions/Organizations

- SOC 220 - Social Stratification Credits: 3
- SOC 365 - Elites in Society Credits: 3



- SOC 410 - Family and Society Credits: 3
- SOC 435 - Gender, Organizations, and Leadership Credits: 3

### Note:

Students should refer to the sociology Course Descriptions in the catalog for other courses which may apply to their special interest areas.

## Software Engineering, B.S.

Software engineers develop really big software applications. When an application is too big for a few people to build, two things become critical. First, code that works is no longer good enough. Since a lot of people are going to have to work on the software, the quality of the internal design of the software matters. We need good ways to divide the system into pieces so different people can work on it and so that functionality can continue to be added to it. Second, there are specialized tools and team management processes that we use to ensure that the pieces we are building will fit together without losing any functionality. In addition, we need to be able to predict when we will be able to make a quality deliverable to our customer. Students studying software engineering complete a core of computer science courses and specialized courses in project management, software design patterns, large scale architectures, and team product development.

Software engineering graduates are sought by organizations that have rigorous demands on their software. This includes military applications, fault tolerant applications like airplane control systems, and applications that are too large to fit on one machine. Also, large software development organizations employ software engineers to coordinate the activities of many software developers. This means that software engineers can work on anything from PC-based applications to real-time embedded control systems to enterprise-wide systems. Since they are well-versed in computer science techniques, software engineers can work in any software development activity.

### Engineering (9 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

### Software Engineering (20 crs.)

- SWE 200 - Design Patterns Credits: 4
- SWE 300 - Crafting Quality Code Credits: 4
- SWE 400 - Large Scale Architectures Credits: 4
- SWE 415 - Interdisciplinary Development Credits: 4
- SWE 420 - Extreme Programming Credits: 4

### Computer Science (16 crs.)

- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 310 - Design and Analysis of Algorithms Credits: 4

- CSC 371 - Database Management Systems Credits: 4
- CSC 431 - Computer Networks Credits: 4

## Computer Engineering (8 crs.)

- CMPE 220 - Computer Organization Credits: 4
- CMPE 320 - Operating Systems Credits: 4

## Mathematics (16 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 375 - Probability and Statistics for Engineers Credits: 4

## Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3

## Electives

- 300/400 Level CSC/CMPE or SWE Elective

## **Spanish with Secondary Certification, B.A.**

### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

(36 crs.)

All courses required for the Spanish major are taught in Spanish. Courses numbered below Spanish 200 do not count for the major. Professional Education courses offered by other departments are taught in English. This program is nationally recognized by ACTFL/NCATE.

### Required Spanish (30 crs.)

- SPN 202 - Intermediate Conversation Credits: 3  
OR
- SPN 215 - Intermediate Spanish For Heritage and Native Speakers Credits: 3
  
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 302 - Advanced Spanish Conversation Credits: 3
- SPN 309 - Spanish Phonetics Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3
- SPN 313 - Advanced Composition and Stylistics Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3

### Spanish Electives (6 crs.)

Two additional Spanish courses—at least one at the 300 level or above; at least one at the 400 level

Spanish majors and minors are strongly urged to take history, political science, and geography courses that deal with Spanish-speaking countries.

### Required Professional Education Courses (30 crs.)

#### If planning to teach Spanish

- TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
- TCH 251 - Elements of Middle Level Instruction Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- EDU 495 - Student Teaching and Professional Practicum Credits: 9-15

#### Note:

\* Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ), 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ), and 2 math courses (except MAT 185 ). If any exceptions are made, they must be approved by the Teacher Education Office. Other requirements for teacher certification are available from the Department of Modern Languages.

## Dual Certification Spanish and Another Field

Students planning to teach will find it to their advantage to work for dual certification in two modern languages, a modern language and English, or a modern language and another field. To achieve dual certification a student must have the approval of both departments involved, complete the normal requirements for a major in the primary area of interest and a 30-hour sequence in the secondary area of specialization, plus appropriate courses in the methodology and student teaching in both areas.

### **Spanish, B.A.**

#### Note:

All students completing a Bachelor of Arts degree are required to attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP or CLEP testing.

#### (36 crs.)

All courses required for the Spanish major are taught in Spanish. Courses numbered below Spanish 200 do not count for the major.

#### Required Spanish (30 crs.)

- SPN 202 - Intermediate Conversation Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 302 - Advanced Spanish Conversation Credits: 3
- SPN 309 - Spanish Phonetics Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3
- SPN 313 - Advanced Composition and Stylistics Credits: 3
- SPN 343 - Introduction to Literary Studies Credits: 3
- SPN 360 - Masterpieces of Spanish Literature Credits: 3
- SPN 361 - Masterpieces of Spanish-American Literature Credits: 3

#### Spanish Electives (6 crs.)

Two additional Spanish courses—at least one at the 300 level or above; at least one at the 400 level.

Spanish majors and minors are strongly urged to take history, political science, and geography courses that deal with Spanish-speaking countries.

### **Special Education and Early Childhood Education, B.S.Ed.**

#### Required Courses (15 cr.)

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3

- HCS 100 - Introduction to Human Communication Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3

## Categories of Knowledge

### Category A - Rational Thinking

- MAT 110 - Fundamentals of Mathematics I Credits: 3

### Category B - Literary Artistic and Cultural Traditionals (9 crs.)

#### Literature (Select one)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3

#### Fine Arts (6 crs.)

Choose 2 from different disciplines

#### Art

(ART 101 is recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

#### Music

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

#### Theatre

- THE 121 - Introduction to the Theatre Credits: 3

### Category C - Laboratory Science (9 crs.)

Select one course from each of the 3 categories. One of the 3 courses must have a laboratory component indicated with an asterisk (\*).

## Biology

- BIO 100 - Basic Biology Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3 \*
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4 \*
- BIO 208 - Field Biology Credits: 3 \*
- BIO 242 - Ecology Credits: 3 \*

## Earth Science

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 \*
- ESS 111 - Introduction to the Atmosphere Credits: 3 \*
- ESS 210 - Physical Geology Credits: 3 \*
- BIO 145 - Environmental Biology Credits: 3

## Physical Sciences

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3  
and
- PHY 123 - Physics I Laboratory Credits: 1 \*
  
- PHY 205 - Intermediate Physics I Credits: 3 \*
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3 \*
- CHM 121 - Chemical Bonding Credits: 3

## Category D - Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Category E - Social & Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Choose One of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Professional Core (75 cr.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 280 - Physical, Language and Cognitive Development Credits: 3
- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3
- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- ECH 480 - Early Childhood Professional Seminar Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 280 - Best Practices in Collaboration: Educators, Families, & Related Service Providers Credits: 3
- EEC 320 - Interventions for Students with Communication Impairments Credits: 3
- EEC 325 - Interventions for Students with Social/Emotional and Behavioral Impairments Credits: 3
- EEC 330 - Teaching Students with Exceptionalities in a Standards-Aligned System Credits: 3
- EEC 335 - Interventions for Students with Cognitive and/or Physical Impairments Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3
- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4

## Early Childhood/Special Education Student Teaching (12 crs.)

- ECS 489 - Student Teaching and Professional Practicum Credits: 12

## Supply Chain Management, B.S.B.A.

Supply Chain Management involves the strategic integration of diverse business facilities, functions, and activities throughout the supply chain for the purpose of providing goods and services to customers as efficiently as possible. Achieving efficiency in the supply chain is accomplished by developing knowledge of transportation, inventory control, warehousing, material handling, purchasing, production control, and the tools necessary to analyze and coordinate these activities. The concept of total cost analysis (taking all costs into account before making decisions),

and cost trade-offs (letting one or more costs rise to take advantage of greater savings in other costs) is also central to supply chain management. These concepts, once honed, apply to many facets of business and personal decision making.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

### Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

### Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

#### Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements



Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Required (15 crs.)

- SCM 315 - Strategic Procurement Credits: 3
- SCM 355 - Managing Quality and Continuous Improvement Credits: 3
- SCM 370 - Integrated Supply Chain Systems Credits: 3
- SCM 380 - Data Mining for Supply Chain Management Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

## Electives (3 crs.)

(One course from the following 3-credit courses)

- ACC 312 - Cost Determination and Analysis Credits: 3
- ECO 355 - Environmental Economics Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3
- MGT 450 - Negotiation Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 446 - Applied Project Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- SCM 390 - Strategic Warehouse Management Credits: 3
- SCM 410 - Distribution Systems in Supply Chains Credits: 3

## Supply Chain Management Career Opportunities

Graduates with a Supply Chain Management background can find employment in a wide range of occupational specialties including logistics, warehousing management, transportation management, operations and production management, purchasing, inventory control, and customer service to name but a few. Salaries for recent graduates in supply chain programs, according to several surveys, rank near the top among the various business majors. Supply Chain Management also plays a central role in the global economy. Many job opportunities are available which involve developing and maintaining the international supply chain.

# Supply Chain Management, Logistics Management Concentration, B.S.B.A.

Supply Chain Management involves the strategic integration of diverse business facilities, functions, and activities throughout the supply chain for the purpose of providing goods and services to customers as efficiently as possible. Achieving efficiency in the supply chain is accomplished by developing knowledge of transportation, inventory control, warehousing, material handling, purchasing, production control, and the tools necessary to analyze and coordinate these activities. The concept of total cost analysis (taking all costs into account before making decisions), and cost trade-offs (letting one or more costs rise to take advantage of greater savings in other costs) is also central to supply chain management. These concepts, once honed, apply to many facets of business and personal decision making.

## B.S.B.A. Core Requirements

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

## Required Courses in Related Fields

- MAT 140A - College Algebra Credits: 4
- MAT 140B - College Algebra Credits: 3
- MAT 181 - Applied Calculus Credits: 3

## Required Courses in the John L. Grove College of Business

- ACC 200 - Fundamentals of Financial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- ACC 201 - Managerial Accounting Credits: 3  
*Accounting majors must earn a C or better in this course.*
- BSL 261 - American Legal Environment Credits: 3
- BSN 101 - Foundations of Business Administration Credits: 2
- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 447 - Business and Society Credits: 3
- MGT 497 - Strategic Management Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MKT 305 - Principles of Marketing Credits: 3
- SCM 200 - Statistical Applications in Business Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3

Note:

- Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/MAT 140B. In lieu of MAT 140A/MAT 140B, students are required to take an additional free elective.
- Completion of ECO 101 and ECO 102 will satisfy the requirement for ECO 113.
- Completion of MAT 117 taken at Shippensburg University will satisfy the requirement for SCM 200 .
- MGT 447 Satisfies university diversity requirement.

## Major Course Requirements

Students should meet with their faculty advisor to plan the sequencing of their major program of study. Students interested in a double major and/or minor shall be required to take the prescribed courses in each respective major and/or minor. Students can double count one course between business majors with the permission of the respective department chair(s). Refer to the index under Double Majors and Minors for further information.

## Logistics Management Concentration

Logistics is that part of Supply Chain Management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements. Logistics activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution-strategic, operational and tactical. Logistics is an integrating function, which coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology.

### Required (12 crs.)

- SCM 370 - Integrated Supply Chain Systems Credits: 3
- SCM 390 - Strategic Warehouse Management Credits: 3
- SCM 410 - Distribution Systems in Supply Chains Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

### Electives (6 crs.)

(Two courses from the following 3-credit courses)

- ACC 312 - Cost Determination and Analysis Credits: 3
- ECO 355 - Environmental Economics Credits: 3
- FIN 320 - Risk Management and Insurance Credits: 3
- FIN 340 - Principles of Real Estate Credits: 3
- FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3
- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 342 - Labor Relations and Collective Bargaining Credits: 3
- MGT 370 - International Business Credits: 3
- MGT 394 - Leadership and Decision-Making Credits: 3

- MGT 450 - Negotiation Credits: 3
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- MIS 300 - Information Technology and Business Operations Credits: 3
- MIS 446 - Applied Project Management Credits: 3
- MKT 310 - Personal Selling Credits: 3
- MKT 342 - Business-to-Business Marketing and Analysis Credits: 3
- MKT 365 - Relationship Marketing Credits: 3
- MKT 370 - Services Marketing Credits: 3
- SCM 315 - Strategic Procurement Credits: 3
- SCM 355 - Managing Quality and Continuous Improvement Credits: 3
- SCM 380 - Data Mining for Supply Chain Management Credits: 3

## Logistics Career Opportunities

Logistics is the universal thread or pipeline that plans and coordinates the delivery of products and services to customers all over the world. Logistics professionals manage and coordinate activities in this global pipeline to ensure an effective and efficient flow of materials and information from the time a need arises until it is satisfied and beyond. The demand for logistics managers at all levels is excellent. The Collegiate Employment Research Institute reports that logistics is a field with more positions than graduates each year. *The Wall Street Journal* reports that senior logistics management talent is also in short supply. As logistics managers' roles and value have grown, the need for well-educated, talented professionals with a diverse array of skills has emerged. Earning potential for logistics managers is excellent! In addition to receiving outstanding salaries, logistics managers receive a full range of valuable benefits and most are eligible for bonus pay. A recent study by William M. Mercer, Inc., indicates that more than 85 percent of logistics managers can earn incentive pay in addition to their base salary. It is also important to note salaries for logistics managers have risen each of the last five years according to annual surveys conducted by Ohio State University and Cahners Research.

## Environmental Education Certification

Shippensburg University offers an approved program in environmental education. The program may be taken by Early Childhood/Elementary Education: PK-4 or Elementary/Middle Level Education: Grades 4-8 as an academic sequence or by secondary education majors in biology or geography/earth science. Secondary students in other fields may enroll in the program with the permission of their department chair.

The environmental education program at Shippensburg is a somewhat structured program, but it also allows for much diversity in the selection of courses for the completion of the requirements for the certification. This certification allows the teacher to teach any subject matter which is labeled as environmental education in any grade from kindergarten through the 12th grade.

To receive the certification a student must complete a minimum of 24 credits from the courses described below. The only course which is required of all students is EDU 410 - Environmental Education Practicum Credits: 3.

The practicum is offered during fall semester of odd numbered years and summers during even numbered years.

The additional 21 credits may be selected in a variety of ways, but a minimum of 12 credits must be selected from a core of courses and nine credits must be selected from courses outside of the student's major field of study. These 21 credits must also be selected from a minimum of three departments of the university and include a statistics course.

**24 crs.**

## Required Course

- EDU 410 - Environmental Education Practicum Credits: 3

## Core Courses - 12 crs. minimum

The student must select a minimum of one course from each of the four categories (A-D) below. Additional courses may be counted toward Related Electives.

### Category A.

- BIO 142 - Introduction to Ecology Credits: 3
- BIO 242 - Ecology Credits: 3

### Category B.

- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 448 - Field Botany and Plant Taxonomy Credits: 3

### Category C.

- ESS 110 - Introduction to Geology Credits: 3
- ESS 111 - Introduction to the Atmosphere Credits: 3
- ESS 210 - Physical Geology Credits: 3

### Category D.

- BIO 145 - Environmental Biology Credits: 3
- ESS 108 - Conservation of Natural Resources Credits: 3

## Related Electives

Any remaining credits must be selected from the courses listed below. It is recommended students take as broad a base of courses as possible if they have a strength in one of the science areas. If an area of strength is not evident, it is recommended the remaining electives be used to establish one.

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
- BIO 205 - Marine Biology Credits: 3
- BIO 220 - Microbiology Credits: 4
- BIO 245 - Marine Ecology Credits: 3
- BIO 362 - Invertebrate Zoology Credits: 3
- BIO 363 - Vertebrate Zoology Credits: 3
- BIO 444 - Conservation Biology Credits: 3
- CHM 103 - A Cultural Approach Credits: 3

- CHM 105 - An Observational Approach Credits: 3
- ECO 310 - Public Finance Credits: 3
- ECO 340 - Introduction to Regional Economics Credits: 3
- ECO 345 - The Economics of Growth and Development Credits: 3
- ESS 220 - Oceanography Credits: 3
- ESS 355 - Meteorology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 203 - Climatology Credits: 3
- GEO 224 - Soils Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 371 - Public Management Credits: 3
- MAT 117 - Applied Statistics Credits: 3

#### Note:

BIO 205, BIO 245, and BIO 446 are offered at the Marine Science Consortium, Wallops Island, Virginia.

A student should normally indicate interest in receiving the certification early in his/her undergraduate studies. This interest should be communicated to his/her advisor or department chair so a suitable program can be planned which will allow the student to complete the requirements within a normal four-year program. Students and advisors are urged to consult the catalog for any prerequisites for courses above the 100 levels.

## **Early Childhood/Elementary Education: PK-4, Early Childhood Concentration B.S.Ed.**

### Required Courses

- ENG 114 - Writing Intensive First-Year Seminar Credits: 3
- HCS 100 - Introduction to Human Communication Credits: 3
- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- MAT 111 - Fundamentals of Mathematics II Credits: 3

### Categories of Knowledge

#### Category A - Rational Thinking (3 crs.)

- MAT 110 - Fundamentals of Mathematics I Credits: 3

## Category B - Literary Artistic and Cultural Traditionals (9 crs.)

### Literature (Select one)

- ENG 243 - The Art of the Film Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 250 - Introduction to Literature Credits: 3
- Foreign Literature, with advisement

### Fine Arts (6 crs.)

(Choose 2 from different disciplines)

#### Art

(ART 101 recommended)

- ART 101 - Art Appreciation Credits: 3
- ART 231 - Art History I Credits: 3
- ART 232 - Art History II Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 339 - History of American Art Credits: 3

#### Music (3 crs.)

- MUS 110 - Fundamental Music Skills Credits: 3
- MUS 121 - Introduction to Music Credits: 3
- MUS 261 - World Music Credits: 3

#### Theatre (3 crs.)

- THE 121 - Introduction to the Theatre Credits: 3

## Category C - Laboratory Science (9 crs.)

Select one course from each of the 3 categories. **One** of the 3 courses must have a laboratory component indicated with an asterisk (\*).

### Biology (3 crs.)

- BIO 100 - Basic Biology Credits: 3
- BIO 142 - Introduction to Ecology Credits: 3 \*
- BIO 150 - Human Biology Credits: 3
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4 \*
- BIO 208 - Field Biology Credits: 3 \*
- BIO 242 - Ecology Credits: 3 \*

## Earth Science (3 crs.)

- ESS 108 - Conservation of Natural Resources Credits: 3
- ESS 110 - Introduction to Geology Credits: 3 \*
- ESS 111 - Introduction to the Atmosphere Credits: 3 \*
- ESS 210 - Physical Geology Credits: 3 \*
- BIO 145 - Environmental Biology Credits: 3

## Physical Sciences (3 crs.)

- PHY 108 - Astronomy Credits: 3
- PHY 110 - Physics for Society Credits: 3
  
- PHY 121 - Introductory Physics I - Lecture Credits: 3  
and
- PHY 123 - Physics I Laboratory Credits: 1 \*
  
- PHY 205 - Intermediate Physics I Credits: 3 \*
- CHM 103 - A Cultural Approach Credits: 3
- CHM 105 - An Observational Approach Credits: 3 \*
- CHM 121 - Chemical Bonding Credits: 3

## Category D - Political, Geographic and Economic (6 crs.)

(Choose 2 from different disciplines)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 100 - U.S. Government and Politics Credits: 3

## Category E - Social & Behavioral Sciences (6 crs.)

- PSY 101 - General Psychology Credits: 3

Choose One of the following:

- ANT 111 - Cultural Anthropology Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3

## Professional Core (60 crs.)

- ECH 210 - The Early Childhood Profession Credits: 3
- ECH 220 - Developmental Science: Physical, Motor, & Health Credits: 3
- ECH 260 - Developmental Science: Cognitive & Language Credits: 3



- ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3
- ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3
- ECH 343 - Mathematics Methods I for PreKindergarten & Kindergarten Credits: 3
- ECH 370 - Assessing Young Children Credits: 3
- ECH 373 - Science and Technology Methods in PK-4 Credits: 3
- ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2
- ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1
- ECH 415 - Professional Practicum in PK-4 Credits: 3
- ECH 440 - Building Family and Community Partnerships Credits: 3
- ECH 453 - Integrated Curriculum Pre K-4 Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 363 - Reading and Writing in PK-4 Credits: 3
- RDG 383 - English Language Learners in PK-4 Credits: 2
- RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4
- ECH 340 - Preschool and Kindergarten Curriculum Credits: 3
- ECH 410 - Physical, Motor, and Sensory Development in Early Childhood Credits: 3
- ECH 462 - Practicum in Early Childhood Concentration with Administrative Field Experiences Credits: 3
- ECH 470 - Language Development, Literacy, and Play in Early Childhood Education Credits: 3

### Electives (Select One):

- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3

## **History, European History Concentration, B.A.**

### Required History Courses (18 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### Restricted History Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

## European History Concentration (12 crs.)

Select 12 credits from the following courses:

- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 325 - History of the Tsarist Russia Credits: 3
- HIS 326 - History of the U.S.S.R. Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3
- HIS 332 - English History: 1066 to Present Credits: 3
- HIS 334 - Europe 1715-1815: The Era of the Industrial and French Revolutions Credits: 3
- HIS 337 - History of the Byzantine Empire Credits: 3
- HIS 348 - The History of Ancient Rome Credits: 3
- HIS 356 - History of 19th Century Europe Credits: 3
- HIS 357 - History of Holocaust Credits: 3
- HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3
- HIS 361 - History of 20th Century Europe Credits: 3
- HIS 362 - Europe 1450-1715: The Era of the Renaissance and Reformation Credits: 3
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)
- HIS 390 - Selected Topics in History Credits: 3 (with advisement)
- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)
- HIS 423 - Issues in 20th-Century Europe Credits: 3
- HIS 492 - Selected Topics in History Credits: 3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)

## History, American History Concentration, B.A.

### Required History Courses (18 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### Restricted History Electives (12 crs.)

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

### American History Concentration (12 crs.)

Select 12 credits from the following courses:

- HIS 301 - The West in American History Credits: 3
- HIS 302 - American Business History Credits: 3
- HIS 304 - American Diplomatic History Credits: 3
- HIS 305 - The Civil War Era Credits: 3
- HIS 307 - Contemporary U. S. History since 1945 Credits: 3
- HIS 309 - History of the American Worker Credits: 3
- HIS 314 - History of Jacksonian America Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 319 - Introduction to Public History Credits: 3
- HIS 338 - Colonial America Credits: 3
- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 345 - Military History of the United States Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- HIS 358 - American Environmental History Credits: 3
- HIS 385 - Selected Topics in History Credits: 3 (with advisement)
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 388 - Selected Topics in History Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)
- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)
- HIS 402 - Revolutionary America Credits: 3
- HIS 413 - Pennsylvania History Credits: 3
- HIS 428 - Issues in the Gilded Age and Progressive Era Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HIS 433 - Oral History Credits: 3
- HIS 490 - Selected Topics in History Credits: 1-3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)

## **History, Asian & Middle Eastern History Concentration, B.A.**

### **Required History Courses (18 crs.)**

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3
- HIS 203 - Theory and Practice of History Credits: 3
- HIS 397 - Seminar in Comparative History Credits: 3

### **Restricted History Electives (12 crs.)**

- 300-level or above in American History
- 300-level or above in European History
- 300-level or above in Latin American/African/Middle Eastern or Asian History
- 300-level or above in Latin American/African/Middle Eastern or Asian History

## Asian & Middle Eastern History Concentration

- HIS 339 - The Central Islamic Lands, 500-1700 Credits: 3
- HIS 344 - History of the Modern Middle East Credits: 3
- HIS 350 - History of Modern Japan Credits: 3
- HIS 353 - Modern Southeast Asia Credits: 3
- HIS 354 - Traditional China Credits: 3
- HIS 355 - History of Modern China Credits: 3
- HIS 382 - Selected Topics in History Credits: 1-3  
(with advisement)
- HIS 383 - Selected Topics in History Credits: 1-3 (with advisement)
- HIS 386 - History Research Seminar Credits: 3 (with advisement)
- HIS 387 - History Internship Credits: 3 (with advisement)
- HIS 389 - History Internship Credits: 3 (with advisement)
- HIS 391 - History Internship Credits: 3-6 (with advisement)
- HIS 394 - Selected Topics in History Credits: 3 (with advisement)
- HIS 454 - China and the Outside World Credits: 3
- HIS 482 - Selected Topics in History Credits: 3 (with advisement)
- HIS 483 - Selected Topics in History Credits: 3 (with advisement)
- HIS 496 - Selected Topics in History Credits: 3 (with advisement)
- PHL 336 - Concepts in Buddhism Credits: 3

## Mechanical Engineering, B.S.

The Bachelor of Science in mechanical engineering program prepares students for a wide variety of careers including the design and manufacturing of mechanical and, increasingly, electromechanical components and systems. Advances in technology continue to transform mechanical engineering, and we are using this new program as an opportunity to offer a program that prepares students for the modern workforce. The curriculum includes a focus on professional engineering practice, access to the latest Computer Assisted Design (CAD) and Computer Assisted Manufacturing (CAM) tools, with an emphasis on design for manufacturability, materials, modeling, simulation, process control, and rapid prototyping. One important aspect of this program will be a balance between theory and hands-on practice that will prepare students to be effective and practical engineers when they graduate.

## Math Requirements (22 crs.)

- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 317 - Statistics II Credits: 3
- MAT 322 - Differential Equations Credits: 3

## Science Requirements (20 crs.)

- CHM 121 - Chemical Bonding Credits: 3
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- PHY 123 - Physics I Laboratory Credits: 1

- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 206 - Intermediate Physics II Credits: 3
- PHY 331 - Mechanics I Credits: 4

## Engineering Core (12 crs.)

- ENGR 100 - Engineering Seminar I Credits: 1
- ENGR 110 - Modeling and Simulation Credits: 3
- ENGR 120 - Programming for Engineers Credits: 3
- ENGR 200 - Engineering Seminar II Credits: 1
- ENGR 300 - Engineering Seminar III Credits: 1
- ENGR 310 - Statistical Process Control Credits: 3

## Mechanical Engineering Requirements (35 crs.)

- CMPE 499 - Engineering Design & Development Credits: 2
- ELEC 230 - Instrumentation Credits: 3
- ELEC 330 - Control Systems Credits: 3
- MECH 200 - Statics Credits: 3
- MECH 210 - Dynamics Credits: 4
- MECH 220 - Fluids Credits: 4
- MECH 300 - Engineering Materials Credits: 4
- MECH 310 - Manufacturing Processes Credits: 4
- MECH 400 - Design Methods Credits: 4
- MECH 410 - Mechanics of Thermodynamics Credits: 4

## Computer Science, Computer Science Applications Concentration, B.S.

The computer science program is designed to enable the student to gain knowledge of computer science and to apply this knowledge to an application area. Students will be proficient in developing computer software to solve problems in a number of contexts.

The computer science B.S. degree program and its concentrations are accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>, placing Shippensburg University among 30 Pennsylvania colleges and universities that have accredited ABET programs and one of 10 that include computer science programs.

## Core Requirements (47 crs.)

### Mathematics

- MAT 211 - Calculus I Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3

## Computer Science

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- CMPE 220 - Computer Organization Credits: 4
- CSC 310 - Design and Analysis of Algorithms Credits: 4
- CMPE 320 - Operating Systems Credits: 4
- CSC 371 - Database Management Systems Credits: 4
- CSC 498 - Senior Research Methods Credits: 2
- CSC 499 - Senior Research and Development Credits: 2
- SWE 200 - Design Patterns Credits: 4

## Two Semester Science Sequence

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

OR

- CHM 121 - Chemical Bonding Credits: 3
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1

OR

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 206 - Intermediate Physics II Credits: 3

## Computer Science Applications Concentration Requirements (20 crs.)

- CSC 350 - Introduction to Computer Graphics Credits: 4
- CSC 403 - Machine Learning Credits: 4
- CSC 410 - Theoretical Foundations of Computer Science Credits: 4
- CSC 431 - Computer Networks Credits: 4
- CSC 462 - Artificial Intelligence Credits: 4

## Course Sequencing

A typical first year sequence for all computer science majors is given below:

### Semester I

- CSC 107 - Computer Science I - Lab Credits: 1
- CSC 110 - Computer Science I - Lecture Credits: 3

- MAT 211 - Calculus I Credits: 4 \*
- Three general education courses Credits: 9

## Semester II

- CSC 111 - Computer Science II Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- Two general education courses Credits: 6

### Note:

\*Students unable to begin with MAT 211 - Calculus I may be required to take MAT 175 - Precalculus Credits: 3.

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student's course of study must be approved by the department in writing.

The department maintains a suggested sequence for scheduling the courses required in the core and by the various pre-approved concentrations. To ensure graduating in four years, each student should take the courses in the semesters indicated on the departmental list. The list will be available to students during scheduling.

## Mathematics and Special Education Certification, B.S.

Students completing this dual certification program are eligible to teach in both a mathematics classroom and a special education classroom thereby broadening their job prospects and distinguishing them from the general student population. In addition, as a traditional classroom math teacher, graduates would have the training necessary for effectively dealing with classes in which high numbers of students have Individual Education Plans (IEPs).

A serious national shortage of mathematics (grades 7-12) and special education (Pre-K-12) teachers exists; by 2020 this shortage is expected to reach a critical level, especially in mathematics and science. (U.S. Department of Education, March 2015, *Teacher Shortage Areas Nationwide Listing*). Dual certification will cultivate a new creative student audience filling the state-wide deficit of students situated to excel in special education mathematics classrooms further fulfilling the growing workforce needs.

### Core Courses (33-34 crs.)

- MAT 185 - First Year Mathematics Seminar Credits: 1
- MAT 211 - Calculus I Credits: 4
- MAT 212 - Calculus II Credits: 4
- MAT 213 - Calculus III Credits: 4
- MAT 217 - Statistics I Credits: 4
- MAT 225 - Discrete Mathematics Credits: 4
- MAT 318 - Elementary Linear Algebra Credits: 3
- MAT 320 - Introduction to Abstract Algebra Credits: 3
  
- MAT 430 - Complex Analysis Credits: 3  
OR
- MAT 441 - Real Analysis I Credits: 3
  
- CSC 104 - Programming in Python Credits: 3

OR

- CSC 180 - Microcomputer Basic Credits: 3

OR

- CSC 110 - Computer Science I - Lecture Credits: 3 AND
- CSC 106 - Computer Science I - Lab Credits: 1 or
- CSC 107 - Computer Science I - Lab Credits: 1

## Secondary Education Certification (45 crs.)

- MAT 326 - Mathematical Modeling Credits: 3
  - MAT 333 - Geometry Credits: 3
  - MAT 400 - History of Mathematics Credits: 3
- MAT 4XX Elective
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
  - EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
  - TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3
  - RDG 413 - Teaching Reading to English Language Learners Credits: 3
  - EDU 371 - Technology in the Mathematics Classroom Credits: 3
  - EDU 434 - Teaching of Mathematics in the Secondary Schools I Credits: 3
  - EDU 435 - Teaching of Mathematics in the Secondary Schools II Credits: 3
  - EDU 495 - Student Teaching and Professional Practicum Credits: 9-15
- Two separate placements - one Math, one Special Education

### Note:

Students seeking certification in secondary education must also complete 1 writing course (ENG 114 or ENG 115 ) and 1 literature course (ENG 190 , ENG 243 , ENG 248 , or ENG 250 ).

## Special Education Courses (21 crs.)

- EEC 280 - Best Practices in Collaboration: Educators, Families, & Related Service Providers Credits: 3
  - EEC 320 - Interventions for Students with Communication Impairments Credits: 3
  - EEC 325 - Interventions for Students with Social/Emotional and Behavioral Impairments Credits: 3
  - EEC 330 - Teaching Students with Exceptionalities in a Standards-Aligned System Credits: 3
  - EEC 335 - Interventions for Students with Cognitive and/or Physical Impairments Credits: 3
  - EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 546 Transition to Adult Life for Students with Disabilities

## **Sustainability, Environmental Conservation Concentration, B.S.**

### Sustainability Core (6 crs.)

- ESS 108 - Conservation of Natural Resources Credits: 3
- OR
- BIO 145 - Environmental Biology Credits: 3



- GEO 427 - Sustainability Credits: 3

## Concentration Core (12+ crs.)

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 360 - Internship in Geography I Credits: 3
- GEO 391 - Geography Seminar Credits: 3

## Sustainable Systems (9 crs.)

Choose 9 credits from the following:

- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3 *Strongly recommended; can only count in one category*

## Human Sustainability Electives (6 crs.)

Choose 6 credits from the following:

- GEO 140 - Cultural Geography Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3

## Technique Course Electives (9 crs.)

Choose 9 credits from the following:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3 *Strongly recommended*
- GEO 450 - Geography-Geology Field Studies Credits: 1-3 *Strongly recommended; can only count in one category*
- GEO 463 - Applied Geophysical Imaging Credits: 3

## Biology (3 crs.)

Choose 3 credits from the following:

- BIO 205 - Marine Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3 *Strongly recommended*
- BIO 245 - Marine Ecology Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3

## Psychology and Sociology (6 crs.)

Choose 6 credits from the following:

- PSY 350 - Psychology of Sustainability Credits: 3 *Strongly recommended*
- SOC 265 - Global Society Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3
- SOC 363 - Population Problems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Economics and Business (3 crs.)

Choose 3 credits from the following:

- ECO 345 - The Economics of Growth and Development Credits: 3
- ECO 355 - Environmental Economics Credits: 3 *Strongly recommended*
- MGT 447 - Business and Society Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3  
SCM 3XX Sustainable Operations Management
- SCM 420 - Global Logistics Systems Credits: 3

## English, History, and Communication (6 crs.)

Choose 6 credits from the following:

- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 359 - Native American Literature Credits: 3
- HCS 345 - Environmental Communication Credits: 3 *Strongly recommended*
- HIS 358 - American Environmental History Credits: 3 *Strongly recommended*

## **Chemistry, Medical Sciences Concentration, B.S.**

To enter into this concentration, students must have a GPA of 3.2. Students in this concentration must maintain a GPA of 3.2 or better.

Students that choose this concentration are not eligible for American Chemical Society Certification.

## Chemistry Requirements (34 crs.; 37 with General Education)

- CHM 110 - The Chemistry Experience Credits: 1
- CHM 121 - Chemical Bonding Credits: 3 *counts towards General Education Category C requirement*
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3
- CHM 301 - Biochemistry I Credits: 3
- CHM 312 - Chemistry Seminar Credits: 1
- CHM 363 - Physical Chemistry I Credits: 4
- CHM 381 - Intermediate Inorganic Chemistry Credits: 3
- CHM 420 - Biochemistry II Credits: 3
- CHM 496 - Introduction to Research I Credits: 1-3
- CHM 497 - Introduction to Research II Credits: 1-3

## Additional Biology Requirements (15 crs.)

- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4
- BIO 260 - Genetics Credits: 4
  
- BIO 350 - Human Physiology Credits: 4  
OR
- BIO 351 - Animal Physiology Credits: 4
  
- BIO 385 - Cell Biology Credits: 3

## Physics Requirements (5 crs.; 8 crs. with General Education)

- PHY 123 - Physics I Laboratory Credits: 1
- PHY 125 - Physics II Laboratory Credits: 1
- PHY 205 - Intermediate Physics I Credits: 3 *counts towards General Education Category C requirement*
- PHY 206 - Intermediate Physics II Credits: 3

## Restricted Electives (4 crs.)

Choose 1 or 2 courses, with advisement

- BIO 220 - Microbiology Credits: 4
- BIO 375 - Histology Credits: 3
- BIO 408 - Principles of Virology Credits: 3
- BIO 418 - Molecular Biology Credits: 3

- BIO 461 - Techniques in Biotechnology Credits: 3
- CHM 364 - Physical Chemistry II Credits: 4
- CHM 371 - Analytical Chemistry Credits: 4
- CHM 421 - Biochemistry Laboratory Credits: 1

## Free Electives (11 crs.)

Students must complete 11 credits of free electives. Recommended free electives include the following:

- BIO 409 - Immunology Credits: 3
- CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1
- CHM 481 - Advanced Inorganic Chemistry Credits: 4
- CHM 490 - Selected Topics in Chemistry Credits: 1-3
- CSC 110 - Computer Science I - Lecture Credits: 3
- SOC 369 - Medical Sociology Credits: 3

## Economics, Data Science Concentration, B.S.

The B.S. in Economics and Data Science concentration provides students the foundation to employ the appropriate statistical techniques to help answer a wide variety of questions confronted by decision makers. According to CNBC.com, "With more and more companies using big data, the demand for [those]...who know how to manage the tsunami of information, spot patterns within it and draw conclusions and insights-is nearing a frenzy."

### Economics B.S.

The Bachelor of Science degree is anchored by a strong core of required economics, mathematics, and statistics courses that provide a solid foundation of analytical and quantitative reasoning. Flexibility comes from selecting one of six concentrations to complement the economics foundation courses. Each concentration has been designed to meet the specific and interests of students focused upon a variety of career or professional options. By partnering with other disciplines, our students are assured of gaining insights from cross-disciplinary studies.

### Course Requirements

#### Required Economics (27 crs.)

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3
- ECO 270 - Intermediate Macroeconomic Theory Credits: 3
- ECO 280 - Managerial Economics Credits: 3
- ECO - Economics Electives at the 300-level or higher

#### Note:

Students taking ECO 113 - Principles of Economics Credits: 4 should not take ECO 101 or ECO 102. Only six hours of Principles credits will count toward the 27 required credit hours in Economics.

### Concentration Requirements

Students may choose from pre-approved concentrations or seek departmental approval for a concentration of their own design. The decision regarding one's concentration should be made normally during the sophomore year. The current pre-approved concentrations are: business, data science, mathematics, political science, public administration, and the social sciences. Each of the concentrations (other than social sciences) has been structured to ensure students earn a minor in the complementary discipline.

## Required Math (4-7 crs.)

- MAT 140A - College Algebra Credits: 4 *or*
- MAT 140B - College Algebra Credits: 3 *AND*
- MAT 181 - Applied Calculus Credits: 3  
OR
- MAT 211 - Calculus I Credits: 4

## Data Science Courses (19-20 crs.)

- CSC 104 - Programming in Python Credits: 3  
OR
- CSC 110 - Computer Science I - Lecture Credits: 3 *and*
- CSC 106 - Computer Science I - Lab Credits: 1  
OR
- MIS 240 - Introduction to Programming Concepts Credits: 3
  
- ECO 333 - Research and Analysis in Economics Credits: 3
- MAT 217 - Statistics I Credits: 4
- MAT 219 - Data Science I Credits: 3
- MAT 317 - Statistics II Credits: 3
- MAT 319 - Data Science II Credits: 3

## Minor

### Anthropology Minor

18 crs.

The anthropology minor consists of 18 credits, nine of which are required, and nine of which are electives. A minimum of 6 credits must be from 300-level or above courses. Three credits of internship may count toward fulfillment of the requirements of the minor.

### Core Courses (9 crs.)

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 121 - Physical Anthropology Credits: 3
  
- ANT 105 - Great Discoveries in Archaeology Credits: 3  
OR
- ANT 150 - Introduction to Archaeology Credits: 3

## Elective Courses (9 crs.)

- Any three ANT courses for a total of 9 credits; two of the three courses need to be at the 300 level or higher.

## Art Minor

21 crs.

### Foundation Courses (9 crs.)

- ART 110 - Basic Drawing Credits: 3
- ART 215 - Color and Two-Dimensional Design Credits: 3 Offered in fall only
- ART 218 - Three-Dimensional Design Credits: 3 Offered in spring only

### Art History Elective (3 crs.)

- ART 231 - Art History I Credits: 3 Offered in 'even year' fall only
- ART 232 - Art History II Credits: 3 Offered in fall only
- ART 233 - Art History III Credits: 3 Offered in spring only
- ART 339 - History of American Art Credits: 3

### Art Electives (9 crs.)

At least 6 credits must be 300/400 level courses.

- ART 210 - Drawing II Credits: 3
- ART 211 - Figure Drawing Credits: 3
- ART 217 - Computer Design I Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- ART 300 - Independent Studio/Ceramics Credits: 3
- ART 301 - Independent Studio/Drawing Credits: 3
- ART 302 - Independent Studio/Enameling Credits: 3
- ART 303 - Independent Studio/Painting Credits: 3
- ART 304 - Independent Studio/Sculpture Credits: 3
- ART 305 - Independent Studio /Computer Design Credits: 3
- ART 306 - Computer Design II Credits: 3 Offered in spring only
- ART 309 - Independent Studio Credits: 3
- ART 319 - Computer Design III Credits: 3 Offered in fall only
- ART 321 - Watercolor I Credits: 3 Offered in spring only
- ART 322 - Watercolor II Credits: 3 Offered in fall only
- ART 326 - Painting I Credits: 3 Offered in fall only
- ART 327 - Painting II Credits: 3 Offered in spring only
- ART 340 - Ceramics Credits: 3
- ART 341 - Advanced Ceramics Credits: 3 Offered in spring only
- ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3
- ART 370 - Sculpture Credits: 3 Offered in fall only
- ART 393 - Selected Topics in Art Credits: 1-3
- ART 395 - Internship in Art I Credits: 3

- ART 399 - Independent Study Credits: 3
- ART 400 - Contemporary Methods in Art Education Credits: 3
- ART 425 - Computer Design IV Credits: 3 Offered in spring only
- ART 430 - Computer Design V Credits: 3 Offered in fall only
- ART 435 - Computer Design VI Credits: 3 Offered in spring only
- ART 490 - Selected Topics in Art Credits: 1-3

## **Biochemistry Minor**

### **Required (24/28 crs.)**

- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1 or
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1
- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3 or
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1 or
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3 or
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- CHM 301 - Biochemistry I Credits: 3
- CHM 420 - Biochemistry II Credits: 3
- CHM 421 - Biochemistry Laboratory Credits: 1
- CHM 496 - Introduction to Research I Credits: 1-3

## **Biology Minor**

19 crs.

### **Required (8 crs.)**

Students must earn a "C" or higher in BIO 161 and BIO 162 before upper-level biology electives may be taken.

- BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4
- BIO 162 - Principles of Biology: Organismal Diversity Credits: 4

### **Electives (11 crs.)**

Electives are to be selected from courses intended for biology majors. At least two 3 credit-hour courses must be at the 300-level or above. BIO 237 , BIO 238 , seminar, internship, and research cannot be used to meet requirements for the minor.

## **Business Minor**

In order to be admitted to the minor, you must successfully complete the general education prerequisites for the program. The first prerequisite is completion of ECO 113 Principles of Economics, ECO 102 Principles of Microeconomics or ECO 101 Principles of Macroeconomics with a C or better. The second prerequisite is the completion of MAT 140A/MAT 140B College Algebra or MAT 117 (taken at Shippensburg University) with a C or better or a higher level mathematics course or a math placement level of 5 or higher.

The business minor consists of four required core business courses and two business elective courses. The four required courses provide you with a solid fundamental background in business. In addition, these foundation courses will apply directly toward meeting some of the requirements of most MBA programs if you decide to pursue a master's degree in business later. The two elective courses in business allow you to tailor the minor to complement your major and to develop an area of specialization to further enhance future employment opportunities.

Numerous studies have shown a high percentage of students, regardless of major, end up pursuing careers in business or careers that require an understanding of business. No matter what career path you take after graduation, whether self-employed or working for an organization, the business concepts and skills you gain from the business minor will help to expand your opportunities and ensure your success.

**18 crs.**

### **Required Core Courses**

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- FIN 311 - Financial Management Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

### **Elective Business Courses**

Two (2) College of Business courses with advisement and completion of prerequisites.

Interested students are encouraged to check out the John L. Grove College of Business website at [www.ship.edu/business](http://www.ship.edu/business) for more information on the business minor. To apply for the business minor, students should stop by Grove Hall 128 to complete an application.

## **Chemistry Minor**

### **Required (23-27 crs.)**

- CHM 121 - Chemical Bonding Credits: 3
- CHM 123 - Laboratory IA-Chemical Systems Credits: 1 or
- CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1



- CHM 122 - Chemical Dynamics Credits: 3
- CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3 or
- CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1
- CHM 221 - Modern Organic Chemistry I Credits: 3
- CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1 or
- CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1
- CHM 222 - Modern Organic Chemistry II Credits: 3
- CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3 or
- CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1
- 7 additional chemistry course credits at the 300 or 400 level

## Coaching Minor

The coaching minor prepares coaches to work with athletic teams in youth sports, junior or senior high school sports, or in recreational sports settings.

The coaching minor prepares students to coach after school and to be employed by school districts as a coach. However it does not prepare teachers to teach physical education classes in a school setting. Many Shippensburg University students enroll in the coaching minor to supplement their chosen major. For example, Elementary Education majors who minor in coaching are trained to teach during the day and coach after school. Secondary Education majors also select the coaching minor for the same reason. Biology majors who select the coaching minor have gone on to graduate school to study exercise physiology after graduation from Shippensburg University. Psychology majors with a Coaching minor have gone on to graduate school in sport psychology. Business majors with the coaching minor have gone on to graduate school in sport management and marketing. The coaching minor can be a stepping stone to many career options.

**Students are required to achieve a grade of C or better in all Coaching minor courses.**

*Education majors who student teach during their senior year are encouraged to declare the minor early.*

## Coaching Requirements - (18 crs.)

### Required Courses

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 325 - Sport Psychology Credits: 3
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 400 - Methods of Coaching Credits: 3

### Electives (Select One): (3 crs.)

- ESC 207 - Stress Management Credits: 3
- ESC 213 - Organization and Administration for Fitness and Sport Facilities Credits: 3

- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3
- SOC 275 - Sociology of Sport and Leisure Credits: 3

## **Communication/Journalism Minor**

18 crs.

### **Required Core Courses (12 crs.)**

Students must have Jr standing to take COM 345.

- COM 111 - Introduction to Mass Communication Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- COM 345 - Communication Law and Ethics Credits: 3

### **Elective Courses (6 crs.)**

Students enrolled in the minor may take any two 200-400 level COM courses with approval of Communication/Journalism faculty advisor.

### **Note:**

The Department of Communication/Journalism does not permit **any** transfer courses to be counted toward fulfillment of minor requirements.

## **Computer Science Minor**

### **Core Courses (20 crs.)**

- CSC 110 - Computer Science I - Lecture Credits: 3
- CSC 107 - Computer Science I - Lab Credits: 1 or
- CSC 106 - Computer Science I - Lab Credits: 1
- CSC 111 - Computer Science II Credits: 4
- SWE 200 - Design Patterns Credits: 4 or
- CMPE 220 - Computer Organization Credits: 4
- 2 electives from CSC, CMPE or SWE at 300 level or higher.

## **Criminal Justice Minor**

A minor in Criminal Justice provides the fundamental exposure necessary to understand the increasing complexity of the criminal justice system. To gain admittance into the Criminal Justice minor, the student must have 2.5 QPA or greater. All Criminal Justice courses must be passed with a grade of C or better. At least one Criminal Justice course

must be taken in a face-to-face format: NO EXCEPTIONS. Non-majors are required to choose from the following courses:

**18 crs.**

### **Required**

- CRJ 100 - Introduction to Criminal Justice Credits: 3

**Complete two of the following courses at the 200 level:**

- CRJ 211 - Criminal Law and Procedure Credits: 3
- CRJ 221 - Policing a Democracy Credits: 3
- CRJ 241 - Survey of Corrections Credits: 3

**Required 300 level course:**

- CRJ 309 - Theories of Crime and Crime Control Credits: 3

**Complete two additional CRJ elective courses at the 300-400 level  
(excludes Internships)**

**Note:**

CRJ 100, CRJ 211, CRJ 221, and CRJ 241 can be offered as summer online course.

## **Disability Studies Minor**

The Disability Studies Minor provides students with a cutting-edge, interdisciplinary body of knowledge and skills geared toward the exploration of the meaning and impact of disability across time, place, and group. As a field akin to Women's and Gender Studies and Ethnic Studies, Disability Studies sees individuals with disabilities as a valuable and integral part of the human community, and it examines the ways in which understandings of disability shape the fundamental aspects of our lives, relationships, and societies. In addition, the program raises awareness of disability issues, knowledge of disability rights and laws, and best practices towards creative toward inclusive and accessible environments and communities. The knowledge and skills gained will prepare students for disability-related careers and advanced study in disability studies, and will enhance and deepen their understanding of the multicultural fabric of contemporary society.

**18 crs.**

### **Core Requirements (6 crs.)**

To complete the Disability Studies minor, students will take the two core courses (DS 100 and DS 400) and four of the approved electives. Elective coursework must represent at least two academic disciplines (defined by course prefix). At least six credits of the minor coursework must be at the 300 or 400 level. At least 50% of the courses for the minor must be taken at Shippensburg University.

- DS 100 - Introduction to Disability Studies Credits: 3
- DS 400 - Capstone in Disability Studies Credits: 3

## Approved Electives (12 crs.)

- ANT 350 - Medical Anthropology Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 397 - Selected Topics in Criminal Justice Credits: 3
- DS 391 - Internship in Disability Studies Credits: 3
- EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3
- EEC 445 - Proactive Approaches for Classroom and Behavior Management Credits: 3
- EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3
- EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3
- EEC 490 - Selected Topics in Special Education Credits: 1-3
- ENG 250 - Introduction to Literature Credits: 3
- ENG 362 - Disability in Literature Credits: 3
- GRN 100 - Introduction to Gerontology Credits: 3
- HON 411 - Honors: Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3
- MGT 340 - Human Resource Management Credits: 3
- MGT 346 - Human Resource Management Law Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 347 - Special Fields of Social Work: Behavioral Health Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 369 - Medical Sociology Credits: 3
- SOC 371 - Social Dynamics of Aging Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SPN 150 - Spanish Civilization and Culture Credits: 3
- SPN 490 - Selected Topics in Spanish Credits: 3

## Economics Minor

The minor in economics has advantages for both business majors and non-business majors. Minor in economics may be a smart move academically and for your career.

## Business Majors -19 crs.

The advantage for business majors is the minor in economics provides a liberal arts component to complement the business degree. Many employers are seeking students who can think about business problems in a broader context.

They are also seeking students with problem solving and analytical abilities. A minor in economics demonstrates breadth, analytical ability, willingness to take challenging courses, and an understanding of the method of a social science. Business majors already take seven credit hours of economics. The economic minor requires only four additional elective courses (two of which must be at the 300/400 level), which can be selected to complement your major.

## Core Courses (7 crs.)

Students may substitute ECO 101 and ECO 102 for ECO 113.

- ECO 113 - Principles of Economics Credits: 4
- ECO 280 - Managerial Economics Credits: 3

## Electives (12 crs.)

Course selected by advisement.

A minimum of 6 credits must be earned at the 300/400 level

## Non-business Majors - 18 crs.

A minor in economics is an excellent complement to many majors. Economics is a relevant major for students preparing for a career in business, law, and many other fields who prefer a liberal arts education. The minor in economics provides some of the same background, but with less depth. With proper advisement, a minor in economics can provide the economics prerequisites for an MBA program or for graduate work in economics. The minor in economics requires students to take ECO 101, ECO 102 and four additional elective courses (two of which must be at the 300/400 level). One of these can be used for general education category D. Many students already have a sequence in economics required by their major and can complete a minor by taking only a few additional courses. The minor in economics can be combined with a sequence of courses in business for students who are seeking employment in the business world, but do not want a business major. For example, ACC 200, ACC 201, BSL 261, MIS 142, and SCM 200 are some appropriate courses available to non-business majors at the lower division level for students who have taken the prerequisites. Some upper division business courses may also be available to non-business majors.

## Core Courses (6 crs.)

Students may substitute ECO 113 for ECO 101 and ECO 102, but then will need to take an additional elective.

- ECO 101 - Principles of Macroeconomics Credits: 3
- ECO 102 - Principles of Microeconomics Credits: 3

## Electives (12 crs.)

Course selected by advisement.

A minimum of 6 credits must be earned at the 300/400 level.

## English Minor

18 crs.

## Required (3 crs.)

- ENG 130 - Literary Studies for the English Major and Minor Credits: 3

### Note:

ENG 130 is a required prerequisite for all English Minors enrolling in 300- or 400- level English courses.

## Electives (15 crs.)

Five additional English courses, two of which (6 credits) must be 300- or 400-level. General education courses in English may not be used to fulfill free electives. May include an internship, up to three credits.

## Ethnic Studies Minor

Ethnic Studies is a multi-ethnic and interdisciplinary program that offers a broad and intense course of study of the various ethnic groups in the United States. Students are encouraged to develop concepts and theories that help clarify attitudes about people of other ethnicities. Through understanding and appreciating others' cultures, students can gain an understanding of the multiple realities of our complex and culturally diverse society.

## 18 crs.

To complete a minor in Ethnic Studies, students must take all three core classes and three approved electives. All students are required to take at least six credits of upper level (300/400 level) courses. Two courses must be taken from at least two different disciplines. All courses must be taken at Shippensburg University.

## Core Requirements (9 crs.)

- ETH 100 - Introduction to Ethnic Studies Credits: 3
- ETH 101 - Introduction to African-American Studies Credits: 3
- ETH 102 - Introduction to Latino Studies Credits: 3

## Approved Electives (9 crs.)

- ANT 111 - Cultural Anthropology Credits: 3
- ANT 341 - North American Indians Credits: 3
- ART 274 - Introduction to Cultural Studio Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- CRJ 411 - Terrorism Credits: 3
- CRJ 452 - Race, Ethnicity, and Crime Credits: 3
- CRJ 464 - Popular Culture, Crime and Justice Credits: 3
- ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3
- ENG 358 - Ethnic Literature Credits: 3
- ENG 375 - African-American Literature Credits: 3
- ETH 390 - Ethnic Studies Internship Credits: 3
- HIS 201 - Early History of the United States Credits: 3
- HIS 202 - Recent History of the United States Credits: 3

- HIS 305 - The Civil War Era Credits: 3
- HIS 341 - African-American History Credits: 3
- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 430 - U.S. Cultural History Credits: 3
- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- MUS 129 - American Popular Music Credits: 3
- PLS 325 - African American Politics Credits: 3
- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- SOC 243 - Minority Groups Credits: 3
- SOC 351 - Race Relations Credits: 3
- SOC 421 - Impact of International Migration Credits: 3
- SWK 250 - Assessing Individuals in the Social Environment Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3

## Exercise Science Minor

The Exercise Science minor is designed to provide students with content from a breadth of disciplines in the exercise science field. The minor is ideal for students who are interested in broadening their experience and knowledge base in the study and analysis of principles related to human movement. Students will acquire new information on key domains of the field including exercise physiology, psychological approach to physical activity, acquisition of motor skills, nutrition principles and injury prevention and treatment strategies. Specifically, the minor provides students with an introductory grounding in physiologic principles that help us understand not only how human systems respond to exercise stress, but also how the body changes with chronic exercise stress. Students also benefit from applied learning experiences in all classes. Such opportunities allow students to apply course principles and to develop new skills.

**Students are required to achieve a grade of C or above in all Exercise Science minor courses.**

**Students must have a 2.5 or better overall GPA, C or better in Biology, and C or better in PSY 101 for admission.**

## Course Requirements (18 crs.)

### Prerequisites

- BIO 150 - Human Biology Credits: 3
- PSY 101 - General Psychology Credits: 3

### Required

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 244 - Mechanical Analysis of Sports Skills Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3

Two of the three following:

- ESC 336 - Motor Behavior Credits: 3
- ESC 340 - Prevention and Care of Athletic Injuries Credits: 3
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 350 - Nutrition for Sport & Fitness Credits: 3

## **French Cultural Studies Minor**

This minor is interdisciplinary and has less of a focus on language than the standard French minor and more on the culture, taught in English. The minor is to be capped with a summer course in Quebec for culture and language immersion or with the double seminar with service learning in Haiti during the Winter Break.

**18 crs.**

### **Required (12 crs.)**

12 credits of core courses in French.

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3

### **Option A (Quebec):**

Includes two courses below, one of which is a summer course taught in Quebec, in English.

- FRN 300 - Advanced French Conversation Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3

### **Option B (Haiti):**

Includes two courses below with service learning in Haiti taught over the winter break, taught in English or French.

- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

### **Interdisciplinary courses in English (6 crs.)**

Two courses are chosen from the list to suit the interests of the students:

- ANT 220 - Anthropology for International Studies Credits: 3
- ART 233 - Art History III Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- ENG 240 - Global Literature Credits: 3
- GEO 103 - Geography of the United States and Canada Credits: 3
- GEO 140 - Cultural Geography Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3
- HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3
- HIS 331 - History of Modern France: 1750 to Present Credits: 3



- MUS 261 - World Music Credits: 3

## **French Minor**

All courses required for the French minor are taught in French. Courses numbered below French 200 do not count for the minor.

**18 crs.**

### **Required (12 crs.)**

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 309 - French Grammar Credits: 3

### **Electives (6 crs.)**

One of the two electives must be a 400 level course.

- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 392 - French Cultural Studies Immersion Credits: 3
- FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- FRN 490 - Selected Topics in French Credits: 3

## **Geographic Information Science Minor**

**18 crs.**

### **Required Core (9 crs.)**

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3

### **Allied Geo-techniques (6 crs.)**

Choose two:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3

## Geography-Earth Science courses (3 crs.)

Choose one:

- ESS 210 - Physical Geology Credits: 3
- ESS 220 - Oceanography Credits: 3
- GEO 226 - Hydrology Credits: 3
- GEO 230 - Economic Geography Credits: 3
- GEO 244 - Land Use Credits: 3
- GEO 301 - Introduction to Biogeography Credits: 3
- GEO 310 - Transportation Geography Credits: 3
- GEO 322 - Urban Geography Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3

## Geography-Earth Science Minor

21 crs.

### Required (9 crs.)

- 100 level Geography and/or Earth Science course
- 200-300 level Geography-Earth Science course
- 400 level Geography-Earth Science course

### Electives (12 crs.)

- ESS or GEO courses selected by advisement.

## German Studies Minor

Not all courses required for the German Studies Minor are taught in German.

18 crs.

### Required (12 crs.)

#### One of the following 100-level German Courses

- GER 150 - German Civilization and Culture Credits: 3
- GER 151 - German Cinema Credits: 3

#### One of the following 200-level German Courses

- GER 203 - Intermediate German Communication Credits: 3
- GER 204 - Contemporary German Culture Credits: 3

## One of the following 300-level German Courses

- GER 309 - German Phonetics Credits: 3
- GER 320 - Berlin Credits: 3

## One of the following 300-Level German Grammar or Composition Course

- GER 312 - German Grammar Credits: 3
- GER 313 - Composition and Stylistics Credits: 3

## Electives (6 crs.)

Two additional 200- to 400-level German courses not already taken as required courses. OR courses from the list below in agreement with the director of the German Studies Minor and the instructor of the course.

- ANT 351 - Peoples and Cultures of Europe Credits: 3
- EDU 426 - Methods of Teaching Foreign Languages Credits: 3
- GEO 305 - Geography of Europe Credits: 3
- HIS 330 - History of Modern Germany: 1919 to Present Credits: 3
- HIS 357 - History of Holocaust Credits: 3
- PHL 105 - Ethical Theories and Problems Credits: 3

## Gerontology Minor

Gerontology is the interdisciplinary study of the aging process, older adults, and issues important to those in later life. Our undergraduate gerontology minor is designed to provide you with the necessary knowledge, skills, and abilities to better serve our rapidly growing older population. Through required course work, electives in your personal area of interest, applied experiences, research opportunities and volunteer activities, you will gain a firm understanding of aging-related issues that can be applied to your major field of study.

Because our older adult population is growing at an astounding rate, it is highly likely you will encounter older people, regardless of your chosen profession. For example, those interested in working with older adults (e.g., psychologists, social workers, physicians, health services professionals), those who want to design products that can be useful to older people (e.g., financial planners, computer software/hardware engineers) or those who are concerned about issues that impact later adulthood (e.g., lawyers, political scientists, sociologists) should all consider enrolling in the gerontology minor. Knowledge about aging can make you a better professional and will signal employers you have what it takes to better serve the needs and interests of this group.

18 crs.

## Core Requirements (6 crs.)

To gain a foundation in aging knowledge and service, all students are required to complete the following courses:

- GRN 100 - Introduction to Gerontology Credits: 3
- GRN 301 - Gerontology Internship Credits: 3

## Approved Electives (12 crs.)

To fulfill the remainder of the minor requirements, students are encouraged to take elective courses that match their personal and professional areas of interest. These include:

- COM 245 - Diversity and the Media Credits: 3
- DS 100 - Introduction to Disability Studies Credits: 3
- ECO 317 - Health Economics Credits: 3
- ESC 200 - Lifestyle Management Credits: 3
- ESC 250 - Introduction to Kinesiology Credits: 3
- ESC 352 - Psychology of Physical Activity Credits: 3
- GRN 303 - Gerontology Internship II Credits: 3
- GRN 391 - Selected Topics in Gerontology Credits: 1-3
- GRN 491 - Advanced Selected Topics in Gerontology Credits: 1-3
- PSY 352 - Adulthood and Aging Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 435 - Psychopharmacology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 344 - Sociology of Death Credits: 3
- SOC 369 - Medical Sociology Credits: 3
- SOC 371 - Social Dynamics of Aging Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SWK 351 - Social Work Elective: Aging Credits: 3
- SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3
- SWK 357 - Special Fields of Social Work: Health Care Credits: 3
- SWK 383 - Selected Topics in Social Welfare Credits: 1-3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- SWK 450 - Social Welfare Policies and Services Credits: 3

## Note:

Selected Topics with an aging theme or significant aging content from any department may count towards the gerontology minor. Contact the director for approval.

ESC 352 has a prerequisite of PSY 101 and ESC 250

GRN 391 may be repeated.

## History Minor

18 crs.

### Required (9 crs.)

- HIS 105 - Historical Foundation of Global Cultures Credits: 3
- HIS 106 - Thinking Historically in a Global Age Credits: 3
  
- HIS 201 - Early History of the United States Credits: 3 or
- HIS 202 - Recent History of the United States Credits: 3

## Electives (9 crs.)

- One course at the 300 level or above in Africa/Asia/Latin America
- One course at the 300 level or above in European History
- One course at the 300 level or above in American History

## Human Communication Studies Minor

### Required Courses (6 crs.)

- HCS 210 - Public Speaking Credits: 3

### Communication Research Core

- HCS 360 - Research Methods in Communication Credits: 3
- HCS 370 - Rhetorical Criticism Credits: 3

### Rhetoric and Symbolism

- HCS 345 - Environmental Communication Credits: 3
- HCS 352 - Argumentation & Debate Credits: 3
- HCS 356 - Persuasion Credits: 3
- HCS 363 - Political Rhetoric Credits: 3
- HCS 365 - Language and Meaning Credits: 3
- HCS 375 - Special Topics in Rhetoric and Symbolism Credits: 3

### Organizational Communication

- HCS 230 - Small Group Communication Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3
- HCS 350 - Theories of Organizational Communication Credits: 3
- HCS 351 - Special Topics Organizational Communication Credits: 3
- HCS 372 - Communication for Training and Instruction Credits: 3
- HCS 381 - Professional Communication and Multi-media Presentation Credits: 3

### Cultural Perspectives

- HCS 270 - Intergroup/Intercultural Communication Credits: 3
- HCS 310 - African-American Communication Credits: 3
- HCS 315 - Asian-American Communication Credits: 3
- HCS 330 - Special Topics in Cultural Perspectives Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3

### Interpersonal Communication

- HCS 220 - Nonverbal Communication Credits: 3
- HCS 225 - Communication and Sport Credits: 3
- HCS 250 - Interpersonal Communication Credits: 3
- HCS 265 - Interviewing Credits: 3
- HCS 333 - Communicating Identity Credits: 3
- HCS 349 - Special Topics in Interpersonal Communication Credits: 3
- HCS 385 - Resolving Conflict through Communication Credits: 3
- HCS 430 - Advanced Interpersonal Communication Credits: 3

## **International Studies Minor**

The International Studies minor can be paired with many different majors including those in business, education and science. The minor has required courses (6 crs.) that provide an overview of international studies. Core courses (6 crs.) and elective courses (9 crs.) give students flexibility to pursue their own international interests. Study abroad and foreign language learning are highly encouraged, but not required. Study abroad courses may be applied to a maximum of 15 credit hours of minor requirements. Students must take INT 200 and INT 300 at Shippensburg University.

**21 crs.**

### **Required (6 crs.)**

- INT 200 - Introduction to International Studies Credits: 3
- INT 300 - International Studies Seminar Credits: 3

### **Core courses (6 crs.)**

- ANT 220 - Anthropology for International Studies Credits: 3
- MGT 370 - International Business Credits: 3
- GEO 101 - World Geography Credits: 3
- PLS 141 - World Politics Credits: 3

### **Electives (9 crs.)**

The remaining three courses may be selected from a wide range of offerings in many departments. Electives need to be in at least two disciplines. Two of the elective courses must be at the 300-level or higher. Courses used to meet the core course requirement cannot double count as minor electives. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

## **Mathematics Minor**

**18-21 crs.**

The mathematics minor consists of six courses. With two possible exceptions, all six courses must be at or above the 200 level, and at least two of the courses must be at or above the 300 level. The two exceptions are as follows:

- MAT 181 may be taken in place of (but not in addition to) MAT 211 for credit toward the minor; however, doing so may restrict your access to some upper-level math courses; and
- MAT 117 may be taken in place of (but not in addition to) MAT 217 for credit toward the minor.

## Music Minor

The Music Minor Program is an 18-credit program that enables students to develop and cultivate their musical knowledge. The courses offered encourage each student to study within their interest yet allow them the opportunity to expand their musical knowledge.

18 crs.

### Prerequisite

Introduction to Music (MUS 121) must be taken as a pre-requisite prior to or within the first two semesters of declaring a Music Minor and does not count toward the required 18 credits. MUS 121 also fulfills the university General Education, Category B requirement. Students then proceed through the nine required and nine elective credits to complete the minor.

- MUS 121 - Introduction to Music Credits: 3

### Required Courses (9 crs.)

Required courses should be taken in the order as listed.

- MUS 140 - Class Piano, Level I Credits: 3
- MUS 212 - Music Theory I Credits: 3
- MUS 320 - Masterpieces of Music Credits: 3

### Elective Courses (9 crs.)

Courses may be chosen from the remaining curricular choices or in consultation with the Department Chair.

Students must take one 300/400 level course as an elective.

Please choose from the following list:

#### Theory

- MUS 312 - Music Theory II Credits: 3
- MUS 110 - Fundamental Music Skills Credits: 3

#### History

- MUS 129 - American Popular Music Credits: 3
- MUS 227 - Opera and Music Theatre Credits: 3
- MUS 261 - World Music Credits: 3
- MUS 315 - Music in the United States Credits: 3

## Performance Courses

- MUS 150 - Basic Guitar Credits: 3
- MUS 260 - Voice Class, Level I Credits: 3
- MUS 270 - Brass Instrument Class Credits: 3
- MUS 272 - Strings Class Credits: 3
- MUS 340 - Class Piano, Level II Credits: 3
- MUS 380 - Basic Conducting Credits: 3
- MUS 393 - Selected Topics in Music Credits: 1-3
- MUS 490 - Selected Topics in Music Credits: 1-3

## Performance

PERFORMING ENSEMBLES: each ensemble is 1 credit, per semester taken. Students may take/retake ensembles as many times as they choose. However, only a maximum of 3 credits will count as an elective towards the Music Minor and graduation.

- MUS 101 - Brass Ensemble Credits: 1
- MUS 103 - Marching Band Credits: 1
- MUS 104 - Concert Band Credits: 1
- MUS 105 - Concert Choir Credits: 1
- MUS 107 - Women's Chorale Credits: 1
- MUS 109 - String Ensemble Credits: 1
- MUS 113 - Jazz Ensemble Credits: 1
- MUS 117 - Madrigal Singers Credits: 1
- MUS 132 - University-Community Orchestra Credits: 1
- MUS 158 - Woodwind Ensemble Credits: 1

### Note:

Please contact the Music Department Office for audition/membership information: 717-477-1638

## Philosophy Minor

18 crs.

### Required Courses

- PHL 248 - History of Ancient and Medieval Philosophy Credits: 3 or
- PHL 249 - History of Modern Philosophy Credits: 3
  
- PHL 340 - Contemporary Ethics Credits: 3
- PHL 200 level course: except PHL 248 or PHL 249
- PHL 300 level course
- PHL course at any level
- PHL course at any level



## **Physics Minor**

26 crs.

### **Required Courses**

- PHY 221 - Fundamentals of Physics I Credits: 5
- PHY 222 - Fundamentals of Physics II Credits: 5
- PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4
- PHY 311 - Quantum I Credits: 4
- PHY 321 - Electricity and Magnetism I Credits: 4
- PHY 331 - Mechanics I Credits: 4

### **Note:**

If the student declaring the minor has already taken either the PHY 121,PHY 122 sequence or the PHY 205,PHY 206 with their associated labs, the PHY 221,PHY 222 requirement is waived for the minor.

## **Political Science Minor**

18 crs.

### **Required (9 crs.)**

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 141 - World Politics Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3

### **Electives (9 crs.)**

Students must select courses from the following list. Students must take two courses at the 300-level or above. Students may take either PLS 291 Contemporary Issues or PLS 391 Selected Topics in Political Science as one elective.

- PLS 231 - State and Local Government Credits: 3
- PLS 251 - Introduction to Comparative Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 291 - Contemporary Issues Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PLS 302 - Public Policy Analysis Credits: 3
- PLS 311 - The Legislative Process Credits: 3
- PLS 312 - The American Presidency Credits: 3
- PLS 313 - The Judicial Process Credits: 3
- PLS 321 - Public Opinion and Political Media Credits: 3
- PLS 322 - Interest Groups in American Society Credits: 3
- PLS 323 - Campaigns, Elections & Political Parties Credits: 3
- PLS 324 - Women in American Politics Credits: 3

- PLS 325 - African American Politics Credits: 3
- PLS 331 - Urban Politics & Administration Credits: 3
- PLS 341 - International Law and Organization Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 356 - Politics of Developing Regions Credits: 3
- PLS 357 - Comparative Revolutions Credits: 3
- PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3
- PLS 362 - Contemporary Political Ideologies Credits: 3
- PLS 363 - American Political Thought Credits: 3
- PLS 365 - Constitutional Law: The Federal System Credits: 3
- PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3
- PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3
- PLS 374 - Public Service Ethics Credits: 3
- PLS 391 - Selected Topics in Political Science Credits: 1-3
- PLS 431 - Pennsylvania Local Government Credits: 3
- PLS 490 - Selected Topics in Political Science Credits: 3
- PLS 491 - Selected Topics in Political Science Credits: 3

## **Psychology Minor**

18 crs.

### **Introductory Course (3 credits)**

- PSY 101 - General Psychology Credits: 3

### **A. Goal: Core Classes (9 credits)**

All courses require a grade of C or better.

- PSY 235 - Conditioning and Learning Credits: 3
- PSY 240 - Psychology of Personality Credits: 3
- PSY 265 - Childhood and Adolescence Credits: 3
- PSY 270 - Social Psychology Credits: 3
- PSY 320 - Behavioral Neuroscience Credits: 3
- PSY 323 - Sensation and Perception Credits: 3
- PSY 325 - Psychology of Human Cognition Credits: 3
- PSY 330 - Abnormal Psychology Credits: 3
- PSY 352 - Adulthood and Aging Credits: 3
- PSY 355 - Psychology of the Exceptional Child Credits: 3
- PSY 383 - Children's Understanding of Their Social World Credits: 3

### **B. Goal: Professional Development (3-6 credits)**

- PSY 311 - Applied Behavior Analysis Credits: 3
- PSY 335 - Psychology of Social Influence Credits: 3
- PSY 361 - Psychology of Group Interaction Credits: 3
- PSY 432 - The Psychology of Computers and the Internet Credits: 3

- PSY 435 - Psychopharmacology Credits: 3
- PSY 475 - Industrial and Organizational Psychology Credits: 3
- PSY 485 - Tests and Measurements Credits: 3

### C. Goal: Ethical and Social Responsibility in a Diverse World (3-6 credits)

- PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3
- PSY 350 - Psychology of Sustainability Credits: 3
- PSY 365 - Multicultural Psychology Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- PSY 420 - Health Psychology Credits: 3
- PSY 447 - Multicultural Health Psychology Credits: 3
- PSY 470 - Legal Psychology Credits: 3

#### Note:

Students must have a total of 9 credits in Goals B & C, with at least one course in each of the areas.

## Public Administration Minor

18 crs.

### Required (9 crs.)

- PLS 100 - U.S. Government and Politics Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 300 - Advanced American Government and Public Policy Credits: 3

### Public Administration Electives (6 crs.)

- PLS 231 - State and Local Government Credits: 3
- PLS 371 - Public Management Credits: 3
- PLS 372 - Public Personnel Administration Credits: 3
- PLS 373 - Public Financial Administration Credits: 3
- PLS 374 - Public Service Ethics Credits: 3

### Elective (3 crs.)

Students must select one public administration/political science course to fulfill this requirement.

## Sociology Minor

18 crs.

## Required (6 crs.)

- SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3
- SOC 380 - Classical Social Theory Credits: 3

## Sociology Electives (12 crs.)

SOC courses selected by advisement.

At least 3 credits must be at 300 level or higher.

## Spanish Minor

All courses required for the Spanish minor are taught in Spanish. Courses numbered below Spanish 200 do not count for the minor.

18 crs.

## Required (12 crs.)

- SPN 202 - Intermediate Conversation Credits: 3
- SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3
- SPN 211 - Intermediate Contextualized Grammar Credits: 3
- SPN 312 - Advanced Contextualized Grammar Credits: 3

## Electives (6 crs.)

Two additional Spanish courses at the 300 or 400 level.

At least one at the 400 level.

## Technical/Professional Communications Minor

Students completing the Technical/Professional Communications Minor will possess a well-rounded education that will help them become lifelong learners, adaptable to and conversant with changing workplace dynamics.

The minor's flexible interdisciplinary design provides students with a combination of the intellectual capabilities and highly marketable professional skills they need to embark on a successful career. Courses offered include two core courses, in technical writing and computer systems, and a variety of additional courses ranging from computer design to advertising copy writing, from advanced technical writing to web design.

Students completing the Technical/Professional Communications Minor will possess up-to-date knowledge and skills that, combined with their major, can lead to careers as a business analyst, editor, market researcher, technical reporter, web developer, media specialist, ad writer/designer, and publications manager. In addition, these skills are often sought as a technical component in many professional positions that are not primarily technical: grant writer, researcher, and marketing manager, among many others.

18 crs.

## Required (6 crs.)

Students must complete 6 credit hours by taking two of the following core courses, one in writing and one in computer systems:

- ENG 238 - Technical/Professional Writing I Credits: 3
- CSC 103 - Overview of Computer Science Credits: 3  
OR
- CSC 110 - Computer Science I - Lecture Credits: 3 and
- CSC 107 - Computer Science I - Lab Credits: 1  
OR
- MIS 142 - Business Computer Systems Credits: 3

### Note:

CSC 110 and CSC 107 for Computer Science Majors Only

## Electives (12 crs.)

The remaining 12 credits may be completed by taking any of the following courses (no more than two courses per department can count for minor credit):

- ART 217 - Computer Design I Credits: 3
- ART 306 - Computer Design II Credits: 3
- ART 319 - Computer Design III Credits: 3
- ART 425 - Computer Design IV Credits: 3
- ART 430 - Computer Design V Credits: 3
- ART 435 - Computer Design VI Credits: 3
- COM 112 - Media Writing Credits: 3
- COM 224 - Electronic Media Writing Credits: 3
- COM 285 - News Writing and Reporting Credits: 3
- COM 290 - Advertising Copywriting Credits: 3
- COM 425 - Feature Writing Credits: 3
- CSC 434 - Web Programming Credits: 4
- ENG 323 - Reviewing the Arts for Publication Credits: 3
- ENG 438 - Technical Professional Writing II Credits: 3
- HCS 260 - Computer-Mediated Communication Credits: 3
- HCS 350 - Theories of Organizational Communication Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- PHL 240 - Ethical Issues and the Media Credits: 3

### Note:

ART 217 is a pre-requisite to any other courses listed in that department.

CSC 434 for Computer Science majors only

# Theatre Minor

The Minor in Theatre enables students to gain a general knowledge of performance and production. Courses provide a grounding in various types and periods of drama, performance skills (acting, scene study), and technical skills (basic drawing, directing, color, and 2D design). The Minor in Theatre is an 18 credit minor. Students proceed through the 15 required and 3 elective credits to complete the minor.

The training available within a theatre curriculum enriches careers in Early Childhood/Elementary Education, Elementary/Middle Level Education, Communication, and English. Students interested in Business, Marketing, or Management may consider the Theatre Minor as an entree to the field of Arts Management

**18 crs.**

## Prerequisite

THE 121 - Introduction to the Theatre Credits: 3 Introduction to Theatre must be taken as a pre-requisite prior to or within the first two semesters of declaring a Theatre Minor and does not count toward the required 18 credits. THE 121 also fulfills the university General Education, Category B requirement.

- THE 121 - Introduction to the Theatre Credits: 3

## Required Courses (15 crs.)

One Theatre course must be taken from each of the four category areas. One additional course in the History, Theory and Literature category is also part of the requirement.

## Elective Courses (3 crs.)

Elective courses in the Theatre Minor enable you to customize the curriculum according to your individual interest. The remaining 3 credits should be chosen from the curricular choices in Theatre and other departments. Any department outside of Music and Theatre, should be contacted regarding prerequisites and seats available.

## Theatre Praxis

- THE 323 - Children's Theatre Credits: 3
- THE 324 - Theatre Practicum Credits: 3
- THE 395 - Theatre Internship Credits: 3
- THE 396 - Theater Internship II Credits: 3

## History, Theory, And Literature

- THE 329 - Theatre History Credits: 3
- ENG 330 - Shakespeare Credits: 3
- MUS 227 - Opera and Music Theatre Credits: 3

## Design Management And Technical Theatre

- THE 229 - Introduction to Technical Production Credits: 3
- THE 327 - Costumes and Make-Up Credits: 3
- THE 395 - Theatre Internship Credits: 3
- THE 396 - Theater Internship II Credits: 3
- THE 490 - Selected Topics in Theatre Credits: 3
- ART 110 - Basic Drawing Credits: 3
- ART 215 - Color and Two-Dimensional Design Credits: 3
- ART 218 - Three-Dimensional Design Credits: 3
- ENT 433 - Small Business Management Credits: 3
- MKT 325 - Advertising and Promotional Strategy Credits: 3
- MKT 370 - Services Marketing Credits: 3

## Performance

- THE 122 - Acting I: Fundamentals of Acting Credits: 3
- THE 222 - Acting II: Scene Study and Analysis Credits: 3
- THE 322 - Voice and Movement for the Stage Credits: 3
- THE 490 - Selected Topics in Theatre Credits: 3
- MUS 260 - Voice Class, Level I Credits: 3

## Women's and Gender Studies Minor

Women's and Gender Studies offers an interdisciplinary program that examines the diverse experiences of women in the U.S. and globally, both past and present. Many courses in the program also critically examine the meanings of gender as a culturally constructed category of identity. The core courses and wide range of electives explore the intersections of gender, race, class, ethnicity, and sexuality, as well as the social and cultural institutions that shape women's and men's lives. Courses in WST investigate previously neglected materials, and apply new methodological, critical, and theoretical approaches in order to analyze and explain the role and status of women in society, and the impact of gendered practices within societies and cultures.

Our undergraduate WST minor is designed to provide you with basic groundwork in the field of Women's and Gender Studies; you will gain a combination of skills that can be used in diverse fields and across disciplines. You will gain an increased understanding of human diversity, especially gender diversity, that will help prepare you for our continuously changing global society. Through required coursework, research, electives in your own area of interest, internships, extracurricular activities, and leadership and service opportunities, you will gain knowledge and experience that will complement and enhance your major field of study.

Students with multicultural Women's and Gender Studies experience will have an advantage as potential employees, since employers will increasingly seek applicants with knowledge of both gender issues and cultural diversity. The Women's and Gender Studies minor will help prepare you to work with a wide variety of people and anticipate their changing needs. Graduates of the Women's and Gender Studies minor find opportunities in business administration and management, advertising, health fields, education, journalism, criminology, social work, counseling, psychology, politics, law, and international affairs.

**18 crs.**

### Core Requirements (6 crs.)

- WST 100 - Introduction to Women's and Gender Studies Credits: 3

- WST 300 - Seminar in Women's and Gender Studies Credits: 3

## Approved Electives (12 crs.)

- ANT 312 - Comparative Marriage and Family Credits: 3
- ANT 320 - Comparative Gender Roles Credits: 3
- COM 245 - Diversity and the Media Credits: 3
- COM 410 - Women and the Media Credits: 3
- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- ECO 303 - Labor Economics: Theory and Policy Credits: 3
- ENG 345 - Women's Literature Credits: 3
- ENG 370 - Queer Studies Credits: 3
- HCS 335 - Popular Culture and Gender Construction Credits: 3
- HCS 340 - Gender and Communication Credits: 3
- HCS 410 - Feminist Perspectives on Communication Theory and Research Methods Credits: 3
- HIS 318 - History of U.S. Women Credits: 3
- HIS 407 - Women in Comparative Perspective Credits: 3
- MAT 400 - History of Mathematics Credits: 3
- PLS 324 - Women in American Politics Credits: 3
- PSY 410 - Psychology and Women Credits: 3
- SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3
- SOC 258 - Women's Roles and Status Credits: 3
- SOC 320 - Sociology of Disability Credits: 3
- SOC 435 - Gender, Organizations, and Leadership Credits: 3
- SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3
- SWK 265 - Understanding Diversity for Social Work Practice Credits: 3
- SWK 359 - Social Work Elective: Violence in Interpersonal Relationships Credits: 3
- SWK 420 - Gender Issues for Helping Professionals Credits: 3
- WST 200 - Independent Study in Women's and Gender Studies Credits: 3
- WST 390 - Internship in Women's and Gender Studies Credits: 3-6

## Note:

To complete the Women's and Gender Studies minor, students will take the two core courses (WST 100 and WST 300) and four of the approved electives. These four electives must come from at least two different disciplines. Two courses may be double-counted toward the student's major and the WST minor. Two elective courses must be at the 300 or 400 level. Five courses must be taken at Shippensburg University.

Additional electives and special topics courses continue to be developed by affiliated Women's and Gender Studies faculty.

## Data Science Minor

### Required Courses (16-17 crs.)

- CSC 104 - Programming in Python Credits: 3
- OR



- CSC 110 - Computer Science I - Lecture Credits: 3
- OR
- MIS 240 - Introduction to Programming Concepts Credits: 3
- MAT 217 - Statistics I Credits: 4
- MAT 219 - Data Science I Credits: 3
- MAT 317 - Statistics II Credits: 3
- MAT 319 - Data Science II Credits: 3

## Discipline-Specific Research Course (2-4 crs.)

Complete 1 of the following:

- BIO 397 - Introduction to Research Credits: 1-3
- BIO 398 - Research II Credits: 1-3
- COM 432 - Public Relations Research and Campaigns Credits: 3
- CSC 499 - Senior Research and Development Credits: 2
- ECO 333 - Research and Analysis in Economics Credits: 3
- ESC 353 - Research Design and Statistics for Exercise Science Credits: 4
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- HCS 360 - Research Methods in Communication Credits: 3
- HIS 386 - History Research Seminar Credits: 3
- MKT 430 - Marketing Research Credits: 3
- PLS 301 - Political Science Research Methods Credits: 3
- PSY 301 - Experimental Psychology Credits: 3
- SCM 481 - Decision Models for Supply Chain Management Credits: 3
- SOC 385 - Introduction to Social Research Credits: 3
- SWK 360 - Research Techniques for Social Workers Credits: 3
- SWK 462 - Seminar in Social Work Methods Credits: 3

## Entrepreneurship Minor

The Entrepreneurship minor provides students with the same basic business knowledge and skills as the Business Minor, but with a strong emphasis on innovation and problem-solving. Students will be exposed to entrepreneurial thinking, opportunity identification, capital funding, and other aspects of the entrepreneurial process applicable in business start-ups, as well as in existing businesses, governmental organizations, and nonprofits. This minor will prepare students to succeed as innovators and value creators in a rapidly changing world.

The minor is made up of six courses, five of which are required. Three of the five required courses provide an essential background in the fundamental business disciplines most necessary for the entrepreneur -- accounting, finance, and marketing. The two remaining required courses focus on the basics of entrepreneurship and managing small businesses. An elective course allows the student to explore further in entrepreneurship, marketing, or management.

18 (crs.)

## Required Courses (15 crs.)

- ACC 200 - Fundamentals of Financial Accounting Credits: 3
- ENT 337 - Issues in Entrepreneurship Credits: 3
- ENT 433 - Small Business Management Credits: 3
- FIN 311 - Financial Management Credits: 3
- MKT 305 - Principles of Marketing Credits: 3

## Electives (Select One):

- ENT 336 - Product Design & Development Credits: 3
- MGT 305 - Organizational Behavior Credits: 3
- MGT 370 - International Business Credits: 3
- MKT 370 - Services Marketing Credits: 3

## Military Science Minor

The Military Science Minor enhances students' individual leadership skills and prepares them for future leadership opportunities across a broad range of disciplines. This minor can be complete by all students at the University, whether they choose to serve in the military or not. Outcomes and objectives of the Minor Program center around Leadership, the Army Profession, Professional Competence, Adaptability, Teamwork, Lifelong Learning, and Comprehensive Fitness.

For the students that take four years of Military Science, the minor codifies the coursework they are already completing. For the student that does not desire to serve in the Army, the minor is flexible enough to allow students to choose interdisciplinary coursework while still achieving the minor's outcomes and objectives. This path allows the student to pursue a diverse program that incorporates military history, ethics, public administration, and the use of the military as an instrument of national power. While the Military Science classes are taught through a military lens, the components of adaptability, teamwork, comprehensive fitness, leadership, and critical thinking are interdisciplinary and applicable regardless of a student's chosen future career path.

All students that graduate the four-year ROTC program will receive commissions into the United States Army as second lieutenants. Clearly the program benefits these students through their military career. Students that choose to take the minor but not the commission into the Army not only learn similar skills, but codify for future employers their academic endeavors that relate to a plethora of state and federal agencies.

## 18-20 (crs.)

### Required Courses (8 crs.)

- MIL 131 - Military Science I (2 crs.) Credits: 2
- MIL 132 - Military Science I Credits: 2
- MIL 231 - Military Science II Credits: 2
- MIL 232 - Military Science II Credits: 2

### Electives (Select One) (2-3 crs.)

- MIL 331 - Military Science III Credits: 2 \*
- MIL 332 - Military Science III Credits: 2 \*
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3

### Electives (Select One): (3 crs.)

- HIS 345 - Military History of the United States Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- MIL 350 - Military Science IV Credits: 3 \*
- MIL 351 - Military Science IV Credits: 3 \*
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 371 - Public Management Credits: 3

### Electives (Select Two) (5-6 crs.)

Remaining credits can be selected from any of the above required courses not fulfilling a prior area.

- HIS 342 - U.S. Immigration and Ethnicity Credits: 3
- HIS 352 - The US and Vietnam Credits: 3
- MIL 331 - Military Science III Credits: 2 \*
- MIL 332 - Military Science III Credits: 2 \*
- MIL 350 - Military Science IV Credits: 3 \*
- MIL 351 - Military Science IV Credits: 3 \*
- PHL 230 - The Ethics of War and Terrorism Credits: 3
- PLS 271 - Introduction to Public Administration Credits: 3
- PLS 342 - American Foreign Policy Credits: 3
- PLS 358 - European Political Economy and Security Credits: 3
- PLS 371 - Public Management Credits: 3

### Note:

\* Students that do not intend to contract with the US Army may only take these courses with Departmental Approval.

Two elective courses, for a total of 6 credits, must be at the 300 or 400 level.

## Reading Minor

### 18 (crs.)

- RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3
- RDG 330 - Content Area Reading in the Primary Grades Credits: 3
- RDG 334 - Classroom Based Literacy Assessment Credits: 3
- RDG 340 - Seminar in Literacy Tutoring Credits: 3
- RDG 345 - Teaching Language Arts in PreK-4 Classroom Credits: 3
- RDG 350 - Text Accessibility and Comprehension in the PK-4 Classroom Credits: 3

# Sustainability Minor

## Sustainability Core (6 crs.)

- ESS 108 - Conservation of Natural Resources Credits: 3  
OR
- BIO 145 - Environmental Biology Credits: 3
- GEO 427 - Sustainability Credits: 3

## Sustainable Systems (3 crs.)

Choose 3 credits from the following:

- ESS 214 - Geology of National Parks Credits: 3
- ESS 404 - Applied Meteorology and Climatology Credits: 3
- ESS 413 - Mineral and Rock Resources Credits: 3
- ESS 442 - Environmental Geology Credits: 3
- ESS 451 - Coastal Environmental Oceanography Credits: 3
- GEO 405 - Environmental Conservation and Management in PA Credits: 3
- GEO 444 - Environmental Land-Use Planning Credits: 3
- GEO 446 - Water Resources Management Credits: 3
- GEO 450 - Geography-Geology Field Studies Credits: 1-3

## Biology (3 crs.)

Choose 3 credits from the following:

- BIO 205 - Marine Biology Credits: 3
- BIO 208 - Field Biology Credits: 3
- BIO 210 - Field Zoology Credits: 3
- BIO 230 - Botany Credits: 3
- BIO 242 - Ecology Credits: 3 *strongly recommended*
- BIO 245 - Marine Ecology Credits: 3
- BIO 442 - Aquatic Ecology Credits: 3
- BIO 444 - Conservation Biology Credits: 3

## Psychology & Sociology (3 crs.)

Choose 3 credits from the following:

- PSY 350 - Psychology of Sustainability Credits: 3 *strongly recommended*
- SOC 265 - Global Society Credits: 3
- SOC 346 - City and Community Credits: 3
- SOC 354 - Social Movements and Social Change Credits: 3
- SOC 363 - Population Problems Credits: 3
- SOC 440 - Global Leadership for Global Society Credits: 3

## Economics & Business (3 crs.)

Choose 3 credits from the following:

- ECO 345 - The Economics of Growth and Development Credits: 3
- ECO 355 - Environmental Economics Credits: 3 *strongly recommended*
- GEO 230 - Economic Geography Credits: 3
- MGT 447 - Business and Society Credits: 3
- MIS 142 - Business Computer Systems Credits: 3
- MIS 242 - Design and Development of User Information Systems Credits: 3
- SCM 330 - Supply Chain and Operations Management Credits: 3
- SCM 420 - Global Logistics Systems Credits: 3

## English, History, & Communication (3 crs.)

Choose 3 credits from the following:

- ENG 238 - Technical/Professional Writing I Credits: 3
- ENG 359 - Native American Literature Credits: 3
- HCS 345 - Environmental Communication Credits: 3 *strongly recommended*
- HIS 358 - American Environmental History Credits: 3 *strongly recommended*

## Certificate

### African & Middle Eastern Studies Certificate

#### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

#### Electives (9 crs.)

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

### Asian Studies Certificate

#### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

## Electives (9 crs.)

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## Ethnic Studies Certificate

To complete the certificate in Ethnic Studies, students must take Introduction to Ethnic Studies (ETH 100) and three of the approved electives. These three electives must be from at least two separate disciplines. Two courses can be double counted toward the student's major at the 300 or 400 level. All four courses must be taken at Shippensburg University.

12 crs.

### Required

- ETH 100 - Introduction to Ethnic Studies Credits: 3

## European Studies Certificate

### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

### Electives (9 crs.)

The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## **French Certificate**

12 crs.

Select four courses from the major. Courses selected by advisement.

## **Translation In French Certificate**

In order to be admitted directly to the Translation in French certificate program at Shippensburg University, students need to have reached the Advanced Low proficiency level in French according to ACTFL guidelines. Students who have not scored at that level will need appropriate training in the areas of language, literature and culture and to this effect complete the core courses in French (24 credits). Once admitted in the Translation in French certificate program, students complete 12 credits in French. In parallel, students also need to complete a minimum of 18 credits in a subject area specialty outside of French to demonstrate deeper knowledge of one or more disciplines outside the linguistics area.

### **Language/Culture Core (24 crs )**

These courses provide students with the linguistic and cultural tools to enable them to successfully function as a mediator between two cultures

### **Required French (24 crs.)**

- FRN 202 - Intermediate Conversation Through the Media Credits: 3
- FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3
- FRN 211 - Intermediate French Grammar Credits: 3
- FRN 300 - Advanced French Conversation Credits: 3
- FRN 308 - Diction et Comprehension Credits: 3
- FRN 309 - French Grammar Credits: 3
- FRN 316 - Composition and Stylistics Credits: 3
  
- FRN 330 - Masterpieces of French Literature Credits: 3  
OR
- FRN 331 - Masterpieces of Francophone Literature Credits: 3  
OR
- FRN 340 - Genres Littéraires Credits: 3

### **Translation Specialization Courses: (12 crs.)**

- FRN 320 - French for the Professions Credits: 3
- FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3
- FRN 411 - Theory and Practice of Translation Credits: 3
- Special Topics/Internship Focused on Translation (300 or 400 level)

## **Geographic Information Systems (GIS) Certificate**

12 crs.

### Required

- GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3
- GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3

### Select Two:

- GEO 339 - Remote Sensing Credits: 3
- GEO 352 - Cartography Credits: 3
- GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3
- GEO 425 - Image Processing Credits: 3
- GEO 440 - Field Techniques Credits: 3
- GEO 441 - Quantitative Methods Credits: 3
- GEO 463 - Applied Geophysical Imaging Credits: 3

## German Certificate

12 crs.

Select four courses from the minor. Courses selected by advisement.

## Graphic Design Certificate

### Required Courses (18 crs.)

- ART 217 - Computer Design I Credits: 3
- ART 306 - Computer Design II Credits: 3 offered in spring only
- ART 319 - Computer Design III Credits: 3 offered in fall only
- ART 425 - Computer Design IV Credits: 3 offered in spring only
- ART 430 - Computer Design V Credits: 3 offered in fall only
- ART 435 - Computer Design VI Credits: 3 offered in spring only

## Latin American Studies Certificate

### Required (3 crs.)

- INT 200 - Introduction to International Studies Credits: 3
- Or an approved substitute

### Electives (9 crs.)



The remaining three courses must concentrate on one world area (Africa & Middle East, Asia, Europe, or Latin America). Two of the elective courses must be at the 300-level or higher. No courses may be double-counted between a Certificate and the International Studies major or minor, or a second Certificate in another world area. A complete list of approved courses is available on the International Studies website [www.ship.edu/ism](http://www.ship.edu/ism). Study abroad and advanced language study are strongly encouraged and may satisfy elective credit.

INT 200 - Introduction to International Studies Credits: 3 majors and minors, and students adding a Certificate in a second world area must consult with the Director of International Studies to choose an appropriate substitute course and complete an Exception Form.

## **Nanotechnology Certificate**

The nanotechnology certificate offers students the technical expertise and theoretical understanding to manipulate matter at the nanometer length scale. Nanofabrication has applications in many fields including physics, biology, material science and engineering. This certificate is very popular with students in part because of the employment opportunities offered to its graduates.

The certificate requires the completion of one semester at the Penn State Center for Nanotechnology Education and Utilization; since this requirement is satisfied during the summer, enrolling in the concentration should not delay graduation.

### **Requirements (30 crs.)**

#### **Required Courses**

- Engineering: Penn State-NSF NMT summer courses (18 crs.)
- PHY 311 - Quantum I Credits: 4
- PHY 325 - Semiconductor Devices Credits: 4
- PHY 450 - Quantum Materials Credits: 4

## **Spanish Certificate**

12 crs.

Select four courses from the major. Courses selected by advisement.

## **Translation in Spanish Certificate**

Students must be a Spanish major to pursue this certificate.

### **Translation Specialization Courses: (9 crs.)**

- SPN 330 - Spanish for the Professions Credits: 3
- SPN 420 - Theory and Practice of Translation Credits: 3
- SPN 425 - Advanced Oral Interpreting Credits: 3

## Note:

Subject Area Specialty Courses: Because translation today requires that translators specialize in one or more areas, we ask that students in the Translation Specialization Program bring together their linguistic skills in Spanish and the knowledge and skills they developed in the other disciplines taught at Shippensburg University. Students can either select a single subject area (that of their major/minor is acceptable, provided that they are not completing a Spanish major/minor) or a combination of relevant courses approved by the Translation Specialization Coordinator.

Possible specialties include, but are not limited to the following: Accounting, Communication/Journalism, Biology, Business, Chemistry, Computer Science, Criminal Justice, Earth Science, Economics, Finance, Geography, Geology, International Studies, Management Information Systems, Marketing, Mathematics, Physics, Political Science, Public Relations.

## Women's and Gender Studies Certificate

Students can earn a Certificate in Women's and Gender Studies by completing the two core courses (WST 100 and WST 300) and two of the approved electives, which must come from two different disciplines. One course may be double-counted toward the student's major and the WST Certificate. Verification of the WST Certificate will appear on the student's transcript. Three courses must be taken at Shippensburg University.

## Power, Agility, and Group Exercise (PAGE) Certificate

### Exercise Science Majors in PAGE Certificate (10 crs.)

- ESC 321 - Exercise Physiology I Credits: 4
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3

### Non-Exercise Science Majors in PAGE Certificate (9 crs.)

- ESC 243 - Physiological Basis of Sport Credits: 3
- ESC 348 - Group Exercise Techniques & Leadership Credits: 3
- ESC 387 - Theory and Practice of Power and Agility Training Credits: 3

## Victimology and Victim Services Certificate

12 (crs.)

### Required Courses (6 crs.)

- CRJ 326 - Victimology: The Victim and the Law Credits: 3
- CRJ 469 - Victim Treatment and Services Credits: 3

Electives at 300 or 400 level (Select Two) (6 crs.)

Please note these courses have the following 'required core' prerequisites: CRJ 309 & 310 .

- CRJ 342 - Crime Prevention Credits: 3
- CRJ 363 - Intimate Partner Violence Credits: 3
- CRJ 381 - Mental Health in the Criminal Justice System Credits: 3
- CRJ 398 - Selected Topics in Criminal Justice Credits: 3 \*
- CRJ 461 - Social Construction of Homicide Credits: 3
- CRJ 466 - Women and Criminal Justice Credits: 3
- CRJ 471 - Internship in Criminal Justice I Credits: 3 \*

Note:

\* Courses require departmental approval.

## **Other Programs**

### **ROTC Program**

#### **Program Requirements**

##### **Basic Program**

- MIL 131 - Military Science I (2 crs.) Credits: 2
- MIL 132 - Military Science I Credits: 2
- MIL 231 - Military Science II Credits: 2
- MIL 232 - Military Science II Credits: 2
- or
- Prior Military Service up to 4 or more crs
- or
- Leaders Training Course

##### **Advanced Program**

- MIL 331 - Military Science III Credits: 2
- MIL 332 - Military Science III Credits: 2
- Leadership Development and Assessment Course
- MIL 350 - Military Science IV Credits: 3
- MIL 351 - Military Science IV Credits: 3

#### **Additional Advanced Course Requirements**

In addition to the core requirements, cadets must complete a course in military history. Students are also encouraged to better enhance their education in courses such as anthropology, written communication, human behavior, management, and international studies.

## **Course Descriptions**

Course descriptions are organized in alphabetical order by subject. Information on courses can be found under appropriate headings in the below sequence.

## **Dual-Level (400) Courses**

Some courses numbered 400 to 499 are open to graduate students and undergraduate students who meet course or program prerequisites. Credits will apply at either the undergraduate or graduate level but not at both. Each student should consult his/her advisor, program director, and/or dean concerning the policy and the appropriateness of the course prior to enrolling in any 400-level courses.

### **Accounting**

**ACC 200 - Fundamentals of Financial Accounting Credits: 3**

**ACC 201 - Managerial Accounting Credits: 3**

**ACC 306 - Tax Accounting Credits: 3**

**ACC 310 - Intermediate Accounting I Credits: 3**

**ACC 311 - Intermediate Accounting II Credits: 3**

**ACC 312 - Cost Determination and Analysis Credits: 3**

**ACC 399 - Independent Study in Accounting Credits: 3**

**ACC 401 - Advanced Accounting Credits: 3**

**ACC 404 - Auditing Credits: 3**

**ACC 406 - Advanced Tax Accounting Credits: 3**

**ACC 412 - Advanced Cost Analysis and Control Credits: 3**

**ACC 418 - Accounting Information and Control Systems Credits: 3**

**ACC 490 - Selected Topics in Accounting Credits: 3**

### **Anthropology**

**ANT 105 - Great Discoveries in Archaeology Credits: 3**

**ANT 111 - Cultural Anthropology Credits: 3**

**ANT 121 - Physical Anthropology Credits: 3**

**ANT 150 - Introduction to Archaeology Credits: 3**

**ANT 190 - General Education Special Topics Credits: 3**

**ANT 211 - Comparative Cultures Credits: 3**

**ANT 220 - Anthropology for International Studies Credits: 3**

**ANT 305 - Food, Drink and Culture Credits: 3**

**ANT 310 - Magic, Science and Religion Credits: 3**

**ANT 312 - Comparative Marriage and Family Credits: 3**

**ANT 320 - Comparative Gender Roles Credits: 3**

**ANT 330 - Mammoth Hunters and Moundbuilders Credits: 3**

**ANT 341 - North American Indians Credits: 3**

**ANT 350 - Medical Anthropology Credits: 3**

**ANT 351 - Peoples and Cultures of Europe Credits: 3**

**ANT 360 - Aztec and Maya Archaeology Credits: 1-3**

**ANT 390 - Internship I Credits: 3**

**ANT 391 - Internship II Credits: 3**

**ANT 392 - Internship III Credits: 3**

**ANT 393 - Selected Topics in Anthropology Credits: 1-1**

**ANT 394 - Selected Topics in Anthropology Credits: 3**

**ANT 395 - Selected Topics in Anthropology Credits: 3**

**ANT 396 - Selected Topics in Anthropology Credits: 3**

**ANT 399 - Independent Study in Anthropology Credits: 3**

**ANT 490 - Selected Topics in Anthropology Credits: 1-3**

## **Art and Design**

**ART 101 - Art Appreciation Credits: 3**

**ART 110 - Basic Drawing Credits: 3**

**ART 190 - General Education Special Topics Credits: 3**

**ART 210 - Drawing II Credits: 3**

**ART 211 - Figure Drawing Credits: 3**

**ART 215 - Color and Two-Dimensional Design Credits: 3**

**ART 217 - Computer Design I Credits: 3**

**ART 218 - Three-Dimensional Design Credits: 3**

**ART 231 - Art History I Credits: 3**

**ART 232 - Art History II Credits: 3**

**ART 233 - Art History III Credits: 3**

**ART 274 - Introduction to Cultural Studio Credits: 3**

**ART 300 - Independent Studio/Ceramics Credits: 3**

**ART 301 - Independent Studio/Drawing Credits: 3**

**ART 302 - Independent Studio/Enameling Credits: 3**

**ART 303 - Independent Studio/Painting Credits: 3**

**ART 304 - Independent Studio/Sculpture Credits: 3**

**ART 305 - Independent Studio /Computer Design Credits: 3**

**ART 306 - Computer Design II Credits: 3**

**ART 309 - Independent Studio Credits: 3**

**ART 319 - Computer Design III Credits: 3**

**ART 321 - Watercolor I Credits: 3**

**ART 322 - Watercolor II Credits: 3**

**ART 326 - Painting I Credits: 3**

**ART 327 - Painting II Credits: 3**

**ART 333 - Independent Studio in Art Credits: 3**

**ART 334 - Independent Studio in Art Credits: 3**

**ART 335 - Independent Studio in Art Credits: 3**

**ART 337 - Printmaking I Credits: 3**

**ART 339 - History of American Art Credits: 3**

**ART 340 - Ceramics Credits: 3**

**ART 341 - Advanced Ceramics Credits: 3**

**ART 356 - Social Structures of Aesthetics, Philosophy and Criticism in the Arts Credits: 3**

**ART 370 - Sculpture Credits: 3**

**ART 385 - Senior Art Seminar Credits: 3**

**ART 389 - Selected Topics in Art Credits: 1**

**ART 391 - Selected Topics in Art Credits: 3**

**ART 392 - Selected Topics in Art Credits: 3**

**ART 393 - Selected Topics in Art Credits: 1-3**

**ART 394 - Selected Topics in Art Credits: 3**

**ART 395 - Internship in Art I Credits: 3**

**ART 396 - Internship in Art II Credits: 3**

**ART 397 - Internship in Art III Credits: 3**

**ART 398 - Independent Study in Art Credits: 3**

**ART 399 - Independent Study Credits: 3**

**ART 400 - Contemporary Methods in Art Education Credits: 3**

**ART 425 - Computer Design IV Credits: 3**

**ART 430 - Computer Design V Credits: 3**

**ART 435 - Computer Design VI Credits: 3**

**ART 485 - Selected Topics in Art Credits: 3**

**ART 490 - Selected Topics in Art Credits: 1-3**

**ART 491 - Selected Topics in Art Credits: 3**

**ART 492 - Selected Topics in Art Credits: 3**

**ART 493 - Selected Topics in Art Credits: 3**

**ART 494 - Selected Topics in Art Credits: 3**

**ART 495 - Selected Topics in Art Credits: 3**

**ART 496 - Selected Topics in Art Credits: 3**

**ART 497 - Selected Topics in Art Credits: 3**

**ART 498 - Selected Topics in Art Credits: 3**

**ART 499 - Selected Topics in Art Credits: 3**

## **Academic Success Program**

**ASP 101 - Introduction to Higher Education Credits: 3**

**ASP 102 - Student Voices: Leadership and Community Credits: 3**

## **Biology**

**BIO 100 - Basic Biology Credits: 3**

**BIO 142 - Introduction to Ecology Credits: 3**

**BIO 145 - Environmental Biology Credits: 3**



**BIO 150 - Human Biology Credits: 3**

**BIO 161 - Principles of Biology: Cell Structure and Function Credits: 4**

**BIO 162 - Principles of Biology: Organismal Diversity Credits: 4**

**BIO 190 - General Education Special Topics Credits: 3**

**BIO 191 - General Education Special Topics Credits: 3**

**BIO 201 - Introduction to Biotechnology Credits: 1**

**BIO 205 - Marine Biology Credits: 3**

**BIO 208 - Field Biology Credits: 3**

**BIO 210 - Field Zoology Credits: 3**

**BIO 220 - Microbiology Credits: 4**

**BIO 230 - Botany Credits: 3**

**BIO 237 - Human Anatomy & Physiology I Credits: 4**

**BIO 238 - Human Anatomy & Physiology II Credits: 4**

**BIO 242 - Ecology Credits: 3**

**BIO 245 - Marine Ecology Credits: 3**

**BIO 260 - Genetics Credits: 4**

**BIO 300 - Careers in the Health Professions Credits: 1**

**BIO 315 - Marine Invertebrates Credits: 3**

**BIO 317 - Parasitology Credits: 3**

**BIO 320 - Marine Botany Credits: 3**

**BIO 324 - Pathogenic Microbiology Credits: 3**

**BIO 325 - Medical Botany Credits: 3**

**BIO 330 - Animal Behavior Credits: 3**

**BIO 331 - Behavior of Marine Organisms Credits: 3**

**BIO 350 - Human Physiology Credits: 4**

**BIO 351 - Animal Physiology Credits: 4**

**BIO 362 - Invertebrate Zoology Credits: 3**

**BIO 363 - Vertebrate Zoology Credits: 3**

**BIO 370 - Comparative Vertebrate Anatomy Credits: 4**

**BIO 371 - Human Anatomy Credits: 4**

**BIO 373 - Developmental Biology Credits: 3**

**BIO 374 - Hematology Credits: 2**

**BIO 375 - Histology Credits: 3**

**BIO 385 - Cell Biology Credits: 3**

**BIO 389 - Research IV Credits: 1-3**

**BIO 391 - Biology Internship I Credits: 1-3**

**BIO 392 - Biology Internship II Credits: 1-3**

**BIO 393 - Selected Topics in Biology Credits: 1-3**

**BIO 394 - Selected Topics in Biology Credits: 3**

**BIO 396 - Research III Credits: 1-3**

**BIO 397 - Introduction to Research Credits: 1-3**

**BIO 398 - Research II Credits: 1-3**

**BIO 399 - Independent Study in Biology Credits: 1**

**BIO 401 - Coral Reef Ecology Credits: 3**

**BIO 403 - Aquaculture Credits: 3**

**BIO 406 - Mammalogy Credits: 3**

**BIO 408 - Principles of Virology Credits: 3**

**BIO 409 - Immunology Credits: 3**

**BIO 412 - Ichthyology Credits: 3**

**BIO 413 - Marine Ichthyology Credits: 3**

**BIO 417 - Herpetology Credits: 3**

**BIO 418 - Molecular Biology Credits: 3**

**BIO 419 - Ornithology Credits: 3**

**BIO 425 - Biota of Florida Credits: 2**

**BIO 430 - Principles of Evolution Credits: 3**

**BIO 442 - Aquatic Ecology Credits: 3**

**BIO 444 - Conservation Biology Credits: 3**

**BIO 448 - Field Botany and Plant Taxonomy Credits: 3**

**BIO 450 - Endocrinology Credits: 3**

**BIO 461 - Techniques in Biotechnology Credits: 3**

**BIO 485 - Biological Microscopy and Imaging Credits: 3**

**BIO 491 - Selected Topics in Biology Credits: 1-3**

**BIO 492 - Selected Topics in Biology Credits: 3**

**BIO 494 - Field Research Techniques Credits: 3**

**BIO 495 - Selected Topics in Biology Credits: 3**

**BIO 496 - Selected Topics in Biology Credits: 3**

**BIO 497 - Selected Topics in Biology Credits: 3**

**BIO 498 - Selected Topics in Biology Credits: 3**

**BIO 499 - Capstone Seminar in Biology Credits: 1**

## **Business Law**

**BSL 261 - American Legal Environment Credits: 3**

## **Business**

**BSN 101 - Foundations of Business Administration Credits: 2**

**BSN 110 - Introduction to Entrepreneurship Credits: 3**

**BSN 408 - Internship in Business Administration I Credits: 1**

**BSN 409 - Internship in Business Administration I Credits: 2**

**BSN 410 - Internship in Business Administration I Credits: 3**

**BSN 411 - Internship in Business Administration II Credits: 3**

**BSN 412 - Internship in Business Administration II Credits: 2**

**BSN 413 - Internship in Business Administration II Credits: 1**

**BSN 417 - Internship Business Administration I Credits: 4**

**BSN 420 - Internship in Business Administration I Credits: 6**

**BSN 421 - Internship Business Administration II Credits: 9**

## **Business Ed of Administration**

**BUS 304 - Managerial Communications Credits: 3**

**BUS 305 - Business Information Processing I Credits: 3**

**BUS 306 - Business Information Processing II Credits: 3**

**BUS 393 - Selected Topics in Business Credits: 3**

**BUS 399 - Independent Study in Business Education Credits: 3**

**BUS 490 - Selected Topics in Business Credits: 2**

## **Chemistry**

**CHM 103 - A Cultural Approach Credits: 3**

**CHM 105 - An Observational Approach Credits: 3**

**CHM 110 - The Chemistry Experience Credits: 1**

**CHM 121 - Chemical Bonding Credits: 3**

**CHM 122 - Chemical Dynamics Credits: 3**

**CHM 123 - Laboratory IA-Chemical Systems Credits: 1**

**CHM 124 - Laboratory IIA-Experimental Quantitative Analysis Credits: 3**

**CHM 125 - Laboratory IB-Stoichiometry and Reactions Credits: 1**

**CHM 126 - Laboratory IIB-Equilibrium and Instrumentation Credits: 1**

**CHM 190 - General Education Special Topics Credits: 3**

**CHM 221 - Modern Organic Chemistry I Credits: 3**

**CHM 222 - Modern Organic Chemistry II Credits: 3**

**CHM 223 - Laboratory IIIA-Experimental Organic Techniques Credits: 1**

**CHM 224 - Laboratory IVA-Qualitative Organic Analysis Credits: 3**

**CHM 225 - Laboratory IIIB-Basic Organic Techniques Credits: 1**

**CHM 226 - Laboratory IVB-Experimental Organic Studies Credits: 1**

**CHM 227 - Introduction to Biochemistry Credits: 4**

**CHM 301 - Biochemistry I Credits: 3**

**CHM 309 - Chemistry Internship Credits: 1-3**

**CHM 310 - Chemistry Internship Credits: 1-3**

**CHM 312 - Chemistry Seminar Credits: 1**

**CHM 313 - Chemistry Seminar Credits: 1**

**CHM 314 - Chemistry Seminar Credits: 1**

**CHM 315 - Chemistry Seminar Credits: 1**

**CHM 324 - Advanced Organic Chemistry Laboratory Credits: 1**

**CHM 363 - Physical Chemistry I Credits: 4**

**CHM 364 - Physical Chemistry II Credits: 4**

**CHM 371 - Analytical Chemistry Credits: 4**

**CHM 381 - Intermediate Inorganic Chemistry Credits: 3**

**CHM 393 - Selected Topics in Chemistry Credits: 1-3**

**CHM 399 - Independent Study in Chemistry Credits: 3**

**CHM 420 - Biochemistry II Credits: 3**

**CHM 421 - Biochemistry Laboratory Credits: 1**

**CHM 481 - Advanced Inorganic Chemistry Credits: 4**

**CHM 490 - Selected Topics in Chemistry Credits: 1-3**

**CHM 491 - Selected Topics in Chemistry Credits: 3**

**CHM 496 - Introduction to Research I Credits: 1-3**

**CHM 497 - Introduction to Research II Credits: 1-3**

## **Chinese**

**CHN 101 - Beginner's Chinese Credits: 3**

**CHN 102 - Beginner's Chinese II Credits: 3**

**CHN 103 - Intermediate Chinese Credits: 3**

## **Computer Engineering**

**CMPE 220 - Computer Organization Credits: 4**

**CMPE 320 - Operating Systems Credits: 4**

**CMPE 322 - Microcontrollers & Interfaces Credits: 4**

**CMPE 410 - Real-Time and Mobile Computing Credits: 4**

**CMPE 420 - Digital and Reconfigurable Computing Credits: 4**

**CMPE 498 - Engineering Research Methods Credits: 2**

**CMPE 499 - Engineering Design & Development Credits: 2**

## **Communication/Journalism**

**COM 111 - Introduction to Mass Communication Credits: 3**

**COM 112 - Media Writing Credits: 3**

**COM 190 - General Education Special Topics Credits: 3**

**COM 201 - Principles of Public Relations Credits: 3**

**COM 224 - Electronic Media Writing Credits: 3**

**COM 241 - Public Relations Writing Credits: 3**

**COM 245 - Diversity and the Media Credits: 3**

**COM 284 - Electronic Media Basic Production Credits: 3**

**COM 285 - News Writing and Reporting Credits: 3**

**COM 290 - Advertising Copywriting Credits: 3**

**COM 293 - Editing Credits: 3**

**COM 305 - Sports Journalism Credits: 3**

**COM 335 - Media Advertising and Sales Credits: 3**

**COM 345 - Communication Law and Ethics Credits: 3**

**COM 355 - Communication/Journalism Professional Practicum Credits: 3**

**COM 360 - Basic Digital Photographic Communication Credits: 3**

**COM 362 - Photojournalism Credits: 3**

**COM 375 - Public Affairs Reporting Credits: 3**

**COM 381 - Promotional Publication Design Credits: 3**

**COM 389 - Internship Communications/Journalism Credits: 3**

**COM 392 - Selected Topics in Communication/Journalism Credits: 3**

**COM 394 - Selected Topics in Communication/Journalism Credits: 3**

**COM 395 - Internship I Credits: 1-6**

**COM 396 - Internship II Credits: 1-6**

**COM 399 - Independent Study in Communication/Journalism Credits: 3**

**COM 410 - Women and the Media Credits: 3**

**COM 424 - Electronic Media Producing and Performance Credits: 3**

**COM 425 - Feature Writing Credits: 3**

**COM 432 - Public Relations Research and Campaigns Credits: 3**

**COM 451 - Electronic Field Production Credits: 3**

**COM 452 - Multimedia Journalism Credits: 3**

**COM 460 - Case Studies in Public Relations Credits: 3**

**COM 470 - Advanced Digital Photographic Communication Credits: 3**

**COM 476 - Magazine Design Credits: 3**

**COM 478 - Digital Journalism Credits: 3**

**COM 481 - Digital Media Design Credits: 3**

**COM 482 - Internet Communication Credits: 3**

**COM 484 - Electronic Media Programming and Management Credits: 3**

**COM 490 - Selected Topics in Communication/Journalism Credits: 1-3**

**COM 491 - Selected Topics in Communication/Journalism Credits: 1-3**



**COM 492 - Selected Topics in Communication/Journalism Credits: 1-3**

**COM 493 - Selected Topics in Communication/Journalism Credits: 3**

**COM 494 - Selected Topics in Communication/Journalism Credits: 3**

## **Criminal Justice**

**CRJ 100 - Introduction to Criminal Justice Credits: 3**

**CRJ 211 - Criminal Law and Procedure Credits: 3**

**CRJ 221 - Policing a Democracy Credits: 3**

**CRJ 241 - Survey of Corrections Credits: 3**

**CRJ 309 - Theories of Crime and Crime Control Credits: 3**

**CRJ 310 - Research Methods Credits: 3**

**CRJ 321 - Criminal Investigation Credits: 3**

**CRJ 326 - Victimology: The Victim and the Law Credits: 3**

**CRJ 336 - Introduction to Forensic Science Credits: 3**

**CRJ 342 - Crime Prevention Credits: 3**

**CRJ 345 - Organization & Management of CRJ Agencies Credits: 3**

**CRJ 351 - Juvenile Justice Credits: 3**

**CRJ 356 - Organized Crime Credits: 3**

**CRJ 363 - Intimate Partner Violence Credits: 3**

**CRJ 365 - White Collar Crime Credits: 3**

**CRJ 370 - Mock Trial Credits: 3**

**CRJ 381 - Mental Health in the Criminal Justice System Credits: 3**

**CRJ 390 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 393 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 396 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 397 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 398 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 399 - Independent Study in Criminal Justice Credits: 1**

**CRJ 411 - Terrorism Credits: 3**

**CRJ 433 - Evidence Law Credits: 3**

**CRJ 440 - Community Corrections Credits: 3**

**CRJ 452 - Race, Ethnicity, and Crime Credits: 3**

**CRJ 454 - Policy, Professionalism, and Ethics Credits: 3**

**CRJ 456 - Forensic Science: Evidence Analysis Credits: 3**

**CRJ 461 - Social Construction of Homicide Credits: 3**

**CRJ 463 - Comparative Criminal Justice Credits: 3**

**CRJ 464 - Popular Culture, Crime and Justice Credits: 3**

**CRJ 466 - Women and Criminal Justice Credits: 3**

**CRJ 469 - Victim Treatment and Services Credits: 3**

**CRJ 471 - Internship in Criminal Justice I Credits: 3**

**CRJ 472 - Internship in Criminal Justice II Credits: 3**

**CRJ 473 - Internship in Criminal Justice III Credits: 3**

**CRJ 474 - Internship in Criminal Justice IV Credits: 3**

**CRJ 475 - Internship in Criminal Justice V Credits: 3**

**CRJ 481 - Independent Study in Criminal Justice Credits: 1-3**

**CRJ 490 - Selected Topics in Criminal Justice Credits: 3**

**CRJ 491 - Selected Topics in Criminal Justice Credits: 3**

## **Computer Science**

**CSC 103 - Overview of Computer Science Credits: 3**

**CSC 104 - Programming in Python Credits: 3**

**CSC 106 - Computer Science I - Lab Credits: 1**

**CSC 107 - Computer Science I - Lab Credits: 1**

**CSC 110 - Computer Science I - Lecture Credits: 3**

**CSC 111 - Computer Science II Credits: 4**

**CSC 120 - Introduction to Computer Science and Metacognition Credits: 3**

**CSC 180 - Microcomputer Basic Credits: 3**

**CSC 190 - General Education Special Topics Credits: 3**

**CSC 191 - General Education Special Topics Credits: 3**

**CSC 310 - Design and Analysis of Algorithms Credits: 4**

**CSC 350 - Introduction to Computer Graphics Credits: 4**

**CSC 361 - Video Game Programming Credits: 4**

**CSC 371 - Database Management Systems Credits: 4**

**CSC 390 - Computer Science Internship I Credits: 3**

**CSC 391 - Computer Science Internship II Credits: 3**

**CSC 392 - Computer Science Internship III Credits: 3**

**CSC 393 - Selected Topics in Computer Science Credits: 4**

**CSC 399 - Independent Study in Computer Science Credits: 3**

**CSC 403 - Machine Learning Credits: 4**

**CSC 410 - Theoretical Foundations of Computer Science Credits: 4**

**CSC 431 - Computer Networks Credits: 4**

**CSC 434 - Web Programming Credits: 4**

**CSC 451 - Computer Graphics Algorithms Credits: 4**

**CSC 462 - Artificial Intelligence Credits: 4**

**CSC 463 - Introduction to Robotics Credits: 4**

**CSC 490 - Selected Topics in Computer Science Credits: 3**

**CSC 491 - Selected Topics in Computer Science Credits: 3**

**CSC 492 - Selected Topics in Computer Science Credits: 3**

**CSC 494 - Selected Topics in Computer Science Credits: 4**

**CSC 495 - Selected Topics in Computer Science Credits: 4**

**CSC 498 - Senior Research Methods Credits: 2**

**CSC 499 - Senior Research and Development Credits: 2**

## **Disability Studies**

**DS 100 - Introduction to Disability Studies Credits: 3**

**DS 391 - Internship in Disability Studies Credits: 3**

**DS 400 - Capstone in Disability Studies Credits: 3**

## **Early Childhood**

**ECH 200 - Introduction to Early Childhood Credits: 3**

**ECH 210 - The Early Childhood Profession Credits: 3**

**ECH 220 - Developmental Science: Physical, Motor, & Health Credits: 3**

**ECH 260 - Developmental Science: Cognitive & Language Credits: 3**

**ECH 280 - Physical, Language and Cognitive Development Credits: 3**

**ECH 320 - Developmental Science: Social & Emotional Basis for Guiding Children's Behavior Credits: 3**

**ECH 330 - Primary Curriculum Credits: 3**

**ECH 333 - Social Studies Methods for PK-4th Grade Credits: 3**

**ECH 340 - Preschool and Kindergarten Curriculum Credits: 3**

**ECH 343 - Mathematics Methods I for PreKindergarten & Kindergarten Credits: 3**

**ECH 370 - Assessing Young Children Credits: 3**

**ECH 373 - Science and Technology Methods in PK-4 Credits: 3**

**ECH 393 - Mathematics Methods II, Grades 2-4 Credits: 2**

**ECH 394 - Technology Instruction for Early Childhood Classrooms Credits: 1**

**ECH 410 - Physical, Motor, and Sensory Development in Early Childhood Credits: 3**

**ECH 415 - Professional Practicum in PK-4 Credits: 3**

**ECH 440 - Building Family and Community Partnerships Credits: 3**

**ECH 453 - Integrated Curriculum Pre K-4 Credits: 3**

**ECH 460 - Family School and Community Partnerships Credits: 3**

**ECH 462 - Practicum in Early Childhood Concentration with Administrative Field Experiences Credits: 3**

**ECH 470 - Language Development, Literacy, and Play in Early Childhood Education Credits: 3**

**ECH 480 - Early Childhood Professional Seminar Credits: 3**

**ECH 489 - Early Childhood Student Teaching Credits: 1-12**

**ECH 490 - Selected Topics in Early Childhood Credits: 3**

**ECH 491 - Selected Topics in Early Childhood Credits: 3**

**ECH 492 - Selected Topics in Early Childhood Credits: 3**

**ECH 493 - Selected Topics in Early Childhood Credits: 3**

**ECH 494 - Selected Topics in Early Childhood Credits: 3**

**ECH 495 - Selected Topics in Early Childhood Credits: 3**

**ECH 496 - Selected Topics in Early Childhood Credits: 3**

**ECH 497 - Selected Topics in Early Childhood Credits: 3**

**ECH 498 - Selected Topics in Early Childhood Credits: 3**

**ECH 499 - Selected Topics in Early Childhood Credits: 3**

## **Economics**

**ECO 101 - Principles of Macroeconomics Credits: 3**

**ECO 102 - Principles of Microeconomics Credits: 3**

**ECO 113 - Principles of Economics Credits: 4**

**ECO 190 - General Education Special Topics Credits: 3**

**ECO 270 - Intermediate Macroeconomic Theory Credits: 3**

**ECO 280 - Managerial Economics Credits: 3**

**ECO 303 - Labor Economics: Theory and Policy Credits: 3**

**ECO 305 - Money and Banking Credits: 3**

**ECO 310 - Public Finance Credits: 3**

**ECO 317 - Health Economics Credits: 3**

**ECO 321 - International Economics Credits: 3**

**ECO 333 - Research and Analysis in Economics Credits: 3**

**ECO 340 - Introduction to Regional Economics Credits: 3**

**ECO 345 - The Economics of Growth and Development Credits: 3**

**ECO 355 - Environmental Economics Credits: 3**

**ECO 360 - Industrial Organization Credits: 3**

**ECO 377 - Sports Economics Credits: 3**

**ECO 391 - Internship in Economics I Credits: 3**

**ECO 392 - Internship in Economics II Credits: 3**

**ECO 393 - Selected Topics in Economics Credits: 3**

**ECO 394 - Selected Topics in Economics Credits: 3**

**ECO 395 - Selected Topics in Economics Credits: 3**

**ECO 396 - Selected Topics in Economics Credits: 3**

**ECO 399 - Independent Study in Economics Credits: 1-3**

**ECO 484 - Mathematical Economics Credits: 3**

**ECO 485 - Econometrics Credits: 3**

**ECO 490 - Selected Topics in Economics Credits: 3**

## **Early Childhood Special Education**

**ECS 415 - Professional Practicum: Pre K-4/Dual Credits: 3**

**ECS 489 - Student Teaching and Professional Practicum Credits: 12**

## **Education Foundation**

**EDU 290 - Introduction to English/Language Arts Education Credits: 3**

**EDU 371 - Technology in the Mathematics Classroom Credits: 3**

**EDU 393 - Selected Topics in Educational Foundations Credits: 1-3**

**EDU 399 - Independent Study in Education Foundation Credits: 3**

**EDU 410 - Environmental Education Practicum Credits: 3**

**EDU 412 - Teaching Social Studies in Secondary Schools I Credits: 3**

**EDU 413 - Teaching of Social Studies II Credits: 3**

**EDU 420 - Microcomputers in the Classroom Credits: 3**

**EDU 422 - Methods of Teaching English in Secondary Schools Credits: 3**

**EDU 426 - Methods of Teaching Foreign Languages Credits: 3**

**EDU 428 - Methods of Teaching and Training in Business Education  
Credits: 3**

**EDU 434 - Teaching of Mathematics in the Secondary Schools I Credits: 3**

**EDU 435 - Teaching of Mathematics in the Secondary Schools II Credits: 3**

**EDU 440 - Teaching of Science in Secondary Schools Credits: 3**

**EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom  
Credits: 3**

**EDU 490 - Selected Topics in Education Foundation Credits: 3**

**EDU 491 - Selected Topics in Education Foundation Credits: 3**

**EDU 492 - Selected Topics in Education Foundation Credits: 3**

**EDU 493 - Selected Topics in Education Foundation Credits: 3**

**EDU 494 - Selected Topics in Education Foundation Credits: 3**

**EDU 495 - Student Teaching and Professional Practicum Credits: 9-15**

**EDU 496 - Selected Topics in Education Foundation Credits: 1**

**EDU 497 - Selected Topics in Education Foundation Credits: 3**

**EDU 498 - Selected Topics in Education Foundation Credits: 3**

**EDU 499 - Selected Topics in Education Foundation Credits: 3**

## **Special Education**

**EEC 273 - Introduction to Exceptionalities: Understanding Diverse Learners  
Credits: 3**



**EEC 280 - Best Practices in Collaboration: Educators, Families, & Related Service Providers Credits: 3**

**EEC 320 - Interventions for Students with Communication Impairments Credits: 3**

**EEC 325 - Interventions for Students with Social/Emotional and Behavioral Impairments Credits: 3**

**EEC 330 - Teaching Students with Exceptionalities in a Standards-Aligned System Credits: 3**

**EEC 335 - Interventions for Students with Cognitive and/or Physical Impairments Credits: 3**

**EEC 423 - Effective Instructional Strategies for Children with Exceptionalities Credits: 3**

**EEC 445 - Proactive Approaches for Classroom and Behavior Management Credits: 3**

**EEC 447 - Special Education Processes in a Standards Aligned System Credits: 3**

**EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making Credits: 3**

**EEC 490 - Selected Topics in Special Education Credits: 1-3**

**EEC 491 - Selected Topics in Special Education Credits: 3**

## **Electrical Engineering**

**ELEC 210 - Signals and Systems Credits: 4**

**ELEC 230 - Instrumentation Credits: 3**

**ELEC 300 - Foundations of Electronic Systems Credits: 4**

**ELEC 323 - Electronic Design & Processes Credits: 4**

**ELEC 330 - Control Systems Credits: 3**

**ELEC 360 - Communications Systems Credits: 4**

**ELEC 422 - High Speed Circuits Credits: 4**

## **Educational Leadership and Policy**

**ELP 490 - Selected Topics in Educational Leadership and Policy Credits: 1-3**

**ELP 491 - Selected Topics in Educational Leadership and Policy Credits: 3**

**ELP 492 - Selected Topics in Educational Leadership and Policy Credits: 3**

**ELP 493 - Selected Topics in Educational Leadership and Policy Credits: 3**

**ELP 494 - Selected Topics in Educational Leadership and Policy Credits: 3**

## **Engineering**

**ENGR 100 - Engineering Seminar I Credits: 1**

**ENGR 110 - Modeling and Simulation Credits: 3**

**ENGR 120 - Programming for Engineers Credits: 3**

**ENGR 200 - Engineering Seminar II Credits: 1**

**ENGR 300 - Engineering Seminar III Credits: 1**

**ENGR 310 - Statistical Process Control Credits: 3**

## **English**

**ENG 050 - Basic Writing Credits: 3**

**ENG 113 - Introduction to Academic Writing Credits: 3**

**ENG 114 - Writing Intensive First-Year Seminar Credits: 3**

**ENG 115 - Advanced Placement Writing Credits: 3**

**ENG 130 - Literary Studies for the English Major and Minor Credits: 3**

**ENG 190 - General Education Special Topics Credits: 3**

**ENG 213 - Writing and Research About Literature Credits: 3**

**ENG 224 - Introduction to Creative Writing Credits: 3**

**ENG 229 - Advanced Composition Credits: 3**

**ENG 233 - American Literature I Credits: 3**

**ENG 234 - American Literature II Credits: 3**

**ENG 236 - British Literature I Credits: 3**

**ENG 237 - British Literature II Credits: 3**

**ENG 238 - Technical/Professional Writing I Credits: 3**

**ENG 239 - Postcolonial Literature Credits: 3**

**ENG 240 - Global Literature Credits: 3**

**ENG 243 - The Art of the Film Credits: 3**

**ENG 248 - Introduction to Culturally Diverse Literature of the U.S. Credits: 3**

**ENG 250 - Introduction to Literature Credits: 3**

**ENG 304 - Literary Criticism Credits: 3**

**ENG 307 - Poetry Writing Credits: 3**

**ENG 308 - Fiction Writing Credits: 3**

**ENG 318 - Studies in English Renaissance Literature Credits: 3**

**ENG 323 - Reviewing the Arts for Publication Credits: 3**

**ENG 330 - Shakespeare Credits: 3**

**ENG 333 - Cultural Studies Credits: 3**

**ENG 335 - Creative Nonfiction Writing Credits: 3**

**ENG 336 - Theories and Approaches: Language, Learning, and Literacy Credits: 3**

**ENG 337 - Romanticism Credits: 3**

**ENG 338 - Technical Writing for Professionals Credits: 3**

**ENG 341 - Teaching Writing in the Secondary Schools Credits: 3**

**ENG 342 - Mythology Credits: 3**

**ENG 344 - Studies in Single Author Credits: 3**

**ENG 345 - Women's Literature Credits: 3**

**ENG 349 - Victorian Literature Credits: 3**

**ENG 358 - Ethnic Literature Credits: 3**

**ENG 359 - Native American Literature Credits: 3**

**ENG 360 - Popular Genres Credits: 3**

**ENG 362 - Disability in Literature Credits: 3**

**ENG 363 - Modernism Credits: 3**

**ENG 364 - Postmodernism Credits: 3**

**ENG 366 - History and Structure of the English Language Credits: 3**

**ENG 367 - Studies in Drama Credits: 3**

**ENG 368 - Studies in Fiction Credits: 3**

**ENG 369 - Studies in Poetry Credits: 3**

**ENG 370 - Queer Studies Credits: 3**

**ENG 373 - Studies in Creative Nonfiction Credits: 3**

**ENG 375 - African-American Literature Credits: 3**

**ENG 376 - Studies in Medieval Literature Credits: 3**

**ENG 377 - The Long 18th Century Credits: 3**

**ENG 380 - 19th Century Literature Credits: 3**

**ENG 383 - Literature After 1900 Credits: 3**

**ENG 385 - Studies in Postcolonial Literature Credits: 3**

**ENG 387 - English Internship I Credits: 1-9**

**ENG 388 - Independent Study-Senior Paper Credits: 3**

**ENG 389 - English Internship II Credits: 1-9**

**ENG 399 - Independent Study in English Credits: 3**

**ENG 420 - Special Topics in Writing Credits: 3**

**ENG 426 - Teaching Adolescent Literature Credits: 3**

**ENG 427 - Advanced Poetry Workshop Credits: 3**

**ENG 428 - Advanced Fiction Workshop Credits: 3**

**ENG 430 - Special Topics in Literary History and Movements Credits: 3**

**ENG 435 - Advanced Creative Nonfiction Credits: 3**

**ENG 438 - Technical Professional Writing II Credits: 3**

**ENG 440 - Special Topics in Genre Credits: 3**

**ENG 445 - Special Topics in Identities Credits: 3**

**ENG 460 - Senior Seminar Credits: 3**

## **Entrepreneurship**

**ENT 336 - Product Design & Development Credits: 3**

**ENT 337 - Issues in Entrepreneurship Credits: 3**

**ENT 431 - Corporate Entrepreneurship Credits: 3**

**ENT 432 - Entrepreneurship Credits: 3**

**ENT 433 - Small Business Management Credits: 3**

## **Exercise Science**

**ESC 200 - Lifestyle Management Credits: 3**

**ESC 207 - Stress Management Credits: 3**

**ESC 213 - Organization and Administration for Fitness and Sport Facilities Credits: 3**

**ESC 243 - Physiological Basis of Sport Credits: 3**

**ESC 244 - Mechanical Analysis of Sports Skills Credits: 3**

**ESC 250 - Introduction to Kinesiology Credits: 3**

**ESC 321 - Exercise Physiology I Credits: 4**

**ESC 325 - Sport Psychology Credits: 3**

**ESC 333 - Biomechanics Credits: 4**

**ESC 336 - Motor Behavior Credits: 3**

**ESC 339 - Exercise Science Seminar Credits: 1-3**

**ESC 340 - Prevention and Care of Athletic Injuries Credits: 3**

**ESC 348 - Group Exercise Techniques & Leadership Credits: 3**

**ESC 350 - Nutrition for Sport & Fitness Credits: 3**

**ESC 352 - Psychology of Physical Activity Credits: 3**

**ESC 353 - Research Design and Statistics for Exercise Science Credits: 4**

**ESC 387 - Theory and Practice of Power and Agility Training Credits: 3**

**ESC 391 - Selected Topics in Exercise Science Credits: 3**

**ESC 393 - Selected Topics in Exercise Science Credits: 1-3**

**ESC 394 - Selected Topics in Exercise Science Credits: 3**

**ESC 399 - Independent Study in Exercise Science Credits: 3**

**ESC 400 - Methods of Coaching Credits: 3**

**ESC 420 - Cardiac Rehab and Special Populations Credits: 4**

**ESC 421 - Exercise Physiology II Credits: 4**

**ESC 422 - Exercise Testing and Prescription Credits: 3**

**ESC 424 - Internship Credits: 6-12**

**ESC 490 - Selected Topics in Exercise Science Credits: 1-3**

**ESC 491 - Selected Topics in Exercise Science Credits: 3**

**ESC 492 - Selected Topics in Exercise Science Credits: 3**

**ESC 493 - Selected Topics in Exercise Science Credits: 3**

## **Earth Science**

**ESS 108 - Conservation of Natural Resources Credits: 3**

**ESS 110 - Introduction to Geology Credits: 3**

**ESS 111 - Introduction to the Atmosphere Credits: 3**

**ESS 190 - General Education Special Topics Credits: 3**

**ESS 191 - General Education Special Topics Credits: 3**

**ESS 210 - Physical Geology Credits: 3**

**ESS 212 - Historical Geology Credits: 3**

**ESS 214 - Geology of National Parks Credits: 3**

**ESS 220 - Oceanography Credits: 3**

**ESS 340 - Marine Geology Credits: 3**

**ESS 355 - Meteorology Credits: 3**

**ESS 393 - Selected Topics in Earth Science Credits: 1-3**

**ESS 397 - Introduction to Research Credits: 3**

**ESS 399 - Independent Study in Earth Science Credits: 3**

**ESS 404 - Applied Meteorology and Climatology Credits: 3**

**ESS 410 - Sedimentary Geology and Paleoenvironments Credits: 3**

**ESS 413 - Mineral and Rock Resources Credits: 3**

**ESS 442 - Environmental Geology Credits: 3**

**ESS 451 - Coastal Environmental Oceanography Credits: 3**

**ESS 475 - Problems in the Marine Science Environment Credits: 3**

**ESS 490 - Selected Topics in Earth Science Credits: 1-3**

**ESS 491 - Selected Topics in Earth Science Credits: 3**

**ESS 492 - Selected Topics in Earth Science Credits: 3**

**ESS 493 - Selected Topics in Earth Science Credits: 3**

**ESS 494 - Selected Topics in Earth Science Credits: 3**

## **Ethnic Studies**

**ETH 100 - Introduction to Ethnic Studies Credits: 3**

**ETH 101 - Introduction to African-American Studies Credits: 3**

**ETH 102 - Introduction to Latino Studies Credits: 3**

**ETH 190 - General Education Special Topics Credits: 3**

**ETH 390 - Ethnic Studies Internship Credits: 3**

**ETH 399 - Independent Study in Ethnic Studies Credits: 3**

## **Finance**

**FIN 101 - Personal Finance Credits: 3**

**FIN 311 - Financial Management Credits: 3**

**FIN 312 - Investments Credits: 3**



**FIN 313 - Advanced Financial Management Credits: 3**

**FIN 314 - Financial Institutions Credits: 3**

**FIN 320 - Risk Management and Insurance Credits: 3**

**FIN 322 - Estate Planning Credits: 3**

**FIN 324 - Retirement Planning and Employee Benefits Credits: 3**

**FIN 333 - Applied Company and Security Analysis Credits: 3**

**FIN 340 - Principles of Real Estate Credits: 3**

**FIN 393 - Selected Topics in Finance Credits: 1-3**

**FIN 399 - Independent Study in Finance Credits: 3**

**FIN 405 - Real Estate Appraisal and Investment Analysis Credits: 3**

**FIN 414 - Bank Management Credits: 3**

**FIN 421 - Personal Financial Planning Credits: 3**

**FIN 425 - Global Financial Management Credits: 3**

**FIN 434 - Investment Management Program Credits: 1-3**

**FIN 435 - Investment Management Program Credits: 1-3**

**FIN 442 - Derivatives Markets Credits: 3**

**FIN 490 - Selected Topics in Finance Credits: 1-3**

## **French**

**FRN 101 - Beginning French I Credits: 3**

**FRN 102 - Beginning French II Credits: 3**

**FRN 103 - Intermediate French Credits: 3**

**FRN 150 - French Civilization Credits: 3**

**FRN 190 - General Education Special Topics Credits: 3**

**FRN 202 - Intermediate Conversation Through the Media Credits: 3**

**FRN 204 - Ideas and Cultures from the French-Speaking World Credits: 3**

**FRN 211 - Intermediate French Grammar Credits: 3**

**FRN 300 - Advanced French Conversation Credits: 3**

**FRN 308 - Diction et Comprehension Credits: 3**

**FRN 309 - French Grammar Credits: 3**

**FRN 316 - Composition and Stylistics Credits: 3**

**FRN 320 - French for the Professions Credits: 3**

**FRN 330 - Masterpieces of French Literature Credits: 3**

**FRN 331 - Masterpieces of Francophone Literature Credits: 3**

**FRN 340 - Genres Littéraires Credits: 3**

**FRN 380 - Aspects De La Civilisation Française/Francophone Credits: 3**

**FRN 388 - Internship French I Credits: 3**

**FRN 392 - French Cultural Studies Immersion Credits: 3**

**FRN 393 - Selected Topics in French Credits: 3**

**FRN 399 - Independent Study in French Credits: 3**

**FRN 400 - Seminar: Advanced Studies in French Language and Literature Credits: 3**

**FRN 401 - Seminar: Advanced Studies in French Language and Literature Credits: 3**

**FRN 402 - Seminar: Advanced Studies in French Language and Literature Credits: 3**

**FRN 411 - Theory and Practice of Translation Credits: 3**

**FRN 490 - Selected Topics in French Credits: 3**

**FRN 491 - Selected Topics in French Credits: 3**

**FRN 492 - Selected Topics in French Credits: 3**

**FRN 493 - Selected Topics in French Credits: 3**

## **Geography**

**GEO 101 - World Geography Credits: 3**

**GEO 103 - Geography of the United States and Canada Credits: 3**

**GEO 105 - Physical Geography Credits: 3**

**GEO 140 - Cultural Geography Credits: 3**

**GEO 190 - General Education Special Topics Credits: 3**

**GEO 202 - GIS I: Introduction to Geographic Information Systems Credits: 3**

**GEO 203 - Climatology Credits: 3**

**GEO 224 - Soils Credits: 3**

**GEO 226 - Hydrology Credits: 3**

**GEO 230 - Economic Geography Credits: 3**

**GEO 244 - Land Use Credits: 3**

**GEO 301 - Introduction to Biogeography Credits: 3**

**GEO 305 - Geography of Europe Credits: 3**

**GEO 306 - Geomorphology Credits: 3**

**GEO 308 - Geography of Latin America Credits: 3**

**GEO 310 - Transportation Geography Credits: 3**

**GEO 313 - Geography of South and Southeast Asia Credits: 3**

**GEO 317 - Geography of East Asia Credits: 3**

**GEO 320 - Historical Geography Credits: 3**

**GEO 322 - Urban Geography Credits: 3**

**GEO 332 - Field Methods in Oceanography Credits: 3**

**GEO 336 - Coastal Geomorphology Credits: 3**

**GEO 339 - Remote Sensing Credits: 3**

**GEO 352 - Cartography Credits: 3**

**GEO 360 - Internship in Geography I Credits: 3**

**GEO 361 - Internship in Geography II Credits: 1-4**

**GEO 363 - GIS II: Intermediate Geographic Information Systems Credits: 3**

**GEO 390 - Internship in Urban Studies I Credits: 3**

**GEO 391 - Geography Seminar Credits: 3**

**GEO 393 - Selected Topics in Geography Credits: 1-3**

**GEO 394 - Internship in Urban Studies II Credits: 3**

**GEO 397 - Introduction to Research Credits: 1-3**

**GEO 398 - Research II Credits: 3**

**GEO 399 - Independent Study in Geography Credits: 3**

**GEO 402 - Medical Geography Credits: 3**

**GEO 404 - Groundwater and Hydrogeology Credits: 3**

**GEO 405 - Environmental Conservation and Management in PA Credits: 3**

**GEO 415 - Regional Geographic Studies Credits: 3**

**GEO 420 - GIS III: Advanced Geographic Information Systems Credits: 3**

**GEO 421 - Environmental Law Credits: 3**

**GEO 425 - Image Processing Credits: 3**

**GEO 427 - Sustainability Credits: 3**

**GEO 440 - Field Techniques Credits: 3**

**GEO 441 - Quantitative Methods Credits: 3**

**GEO 444 - Environmental Land-Use Planning Credits: 3**

**GEO 446 - Water Resources Management Credits: 3**

**GEO 450 - Geography-Geology Field Studies Credits: 1-3**

**GEO 452 - Geography-Geology Field Studies Credits: 1**

**GEO 463 - Applied Geophysical Imaging Credits: 3**

**GEO 490 - Selected Topics in Geography Credits: 1-3**

**GEO 491 - Selected Topics in Geography Credits: 3**

**GEO 492 - Selected Topics in Geography Credits: 3**

**GEO 493 - Selected Topics in Geography Credits: 3**

**GEO 494 - Selected Topics in Geography Credits: 3**

## **German**

**GER 101 - Beginning German I Credits: 3**

**GER 102 - Beginning German II Credits: 3**

**GER 103 - Intermediate German Credits: 3**

**GER 150 - German Civilization and Culture Credits: 3**

**GER 151 - German Cinema Credits: 3**

**GER 190 - General Education Special Topics Credits: 3**

**GER 203 - Intermediate German Communication Credits: 3**

**GER 204 - Contemporary German Culture Credits: 3**

**GER 215 - German for the Professions Credits: 3**

**GER 220 - Intermediate German Grammar Credits: 3**

**GER 300 - Introduction to German Literature Credits: 3**

**GER 309 - German Phonetics Credits: 3**

**GER 312 - German Grammar Credits: 3**

**GER 313 - Composition and Stylistics Credits: 3**

**GER 320 - Berlin Credits: 3**

**GER 322 - Readings in German Literature Credits: 3**

**GER 390 - German Internship Credits: 3**

**GER 393 - Selected Topics in German Credits: 3**

**GER 394 - Selected Topics in German Credits: 3**

**GER 395 - Selected Topics in German Credits: 3**

**GER 399 - Independent Study in German Credits: 3**

**GER 400 - German Seminar Credits: 3**

**GER 490 - Selected Topics in German Credits: 1-3**

## **Gerontology**

**GRN 100 - Introduction to Gerontology Credits: 3**

**GRN 301 - Gerontology Internship Credits: 3**

**GRN 303 - Gerontology Internship II Credits: 3**

**GRN 390 - Selected Topics in Gerontology Credits: 3**

**GRN 391 - Selected Topics in Gerontology Credits: 1-3**

**GRN 392 - Selected Topics in Gerontology Credits: 3**

**GRN 490 - Selected Topics in Gerontology Credits: 3**

**GRN 491 - Advanced Selected Topics in Gerontology Credits: 1-3**

**GRN 492 - Selected Topics in Gerontology Credits: 3**

## **Health Care Administration**

**HCA 400 - Introduction to Health Care Systems Credits: 3**

**HCA 451 - Legal Aspects of Health Care Credits: 3**

**HCA 452 - Health Care Financial Management Credits: 3**

**HCA 453 - Human Resources Management for Health Care Professionals  
Credits: 3**

**HCA 454 - Health Care Strategic Management Credits: 3**

**HCA 485 - Independent Research in Health Care Administration Credits: 1-6**

**HCA 490 - Selected Topics in Health Care Administration Credits: 3**

**HCA 491 - Selected Topics in Health Care Administration Credits: 3**

**HCA 498 - Internship in Health Care Administration Credits: 1-3**

**HCA 499 - Internship in Health Care Administration II Credits: 1-3**

## **Human Communication Studies**

**HCS 100 - Introduction to Human Communication Credits: 3**

**HCS 125 - Survey of Communication Studies Credits: 3**

**HCS 190 - General Education Special Topics Credits: 3**

**HCS 191 - General Education Special Topics Credits: 3**

**HCS 200 - Human Communication Theory Credits: 3**

**HCS 210 - Public Speaking Credits: 3**

**HCS 220 - Nonverbal Communication Credits: 3**

**HCS 225 - Communication and Sport Credits: 3**

**HCS 230 - Small Group Communication Credits: 3**

**HCS 250 - Interpersonal Communication Credits: 3**

**HCS 260 - Computer-Mediated Communication Credits: 3**

**HCS 265 - Interviewing Credits: 3**

**HCS 270 - Intergroup/Intercultural Communication Credits: 3**

**HCS 310 - African-American Communication Credits: 3**

**HCS 315 - Asian-American Communication Credits: 3**

**HCS 325 - The Rhetoric of African-American Struggle and Progress Credits:  
3**

**HCS 330 - Special Topics in Cultural Perspectives Credits: 3**

**HCS 333 - Communicating Identity Credits: 3**

**HCS 335 - Popular Culture and Gender Construction Credits: 3**

**HCS 340 - Gender and Communication Credits: 3**

**HCS 345 - Environmental Communication Credits: 3**

**HCS 349 - Special Topics in Interpersonal Communication Credits: 3**

**HCS 350 - Theories of Organizational Communication Credits: 3**

**HCS 351 - Special Topics Organizational Communication Credits: 3**

**HCS 352 - Argumentation & Debate Credits: 3**

**HCS 356 - Persuasion Credits: 3**

**HCS 360 - Research Methods in Communication Credits: 3**

**HCS 363 - Political Rhetoric Credits: 3**

**HCS 365 - Language and Meaning Credits: 3**

**HCS 370 - Rhetorical Criticism Credits: 3**

**HCS 372 - Communication for Training and Instruction Credits: 3**

**HCS 375 - Special Topics in Rhetoric and Symbolism Credits: 3**



**HCS 381 - Professional Communication and Multi-media Presentation  
Credits: 3**

**HCS 385 - Resolving Conflict through Communication Credits: 3**

**HCS 387 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 388 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 389 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 390 - Internship I Credits: 3**

**HCS 391 - Internship II Credits: 3**

**HCS 392 - Internship III Credits: 3**

**HCS 393 - Selected Topics in Speech Credits: 3**

**HCS 394 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 399 - Independent Study in Human Communication Studies Credits: 3**

**HCS 400 - Senior Seminar Credits: 3**

**HCS 410 - Feminist Perspectives on Communication Theory and Research  
Methods Credits: 3**

**HCS 430 - Advanced Interpersonal Communication Credits: 3**

**HCS 491 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 492 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 493 - Selected Topics in Human Communication Studies Credits: 3**

**HCS 494 - Selected Topics in Human Communication Studies Credits: 3**

## **History**

**HIS 105 - Historical Foundation of Global Cultures Credits: 3**

**HIS 106 - Thinking Historically in a Global Age Credits: 3**

**HIS 190 - General Education Special Topics Credits: 3**

**HIS 201 - Early History of the United States Credits: 3**

**HIS 202 - Recent History of the United States Credits: 3**

**HIS 203 - Theory and Practice of History Credits: 3**

**HIS 301 - The West in American History Credits: 3**

**HIS 302 - American Business History Credits: 3**

**HIS 304 - American Diplomatic History Credits: 3**

**HIS 305 - The Civil War Era Credits: 3**

**HIS 307 - Contemporary U. S. History since 1945 Credits: 3**

**HIS 309 - History of the American Worker Credits: 3**

**HIS 314 - History of Jacksonian America Credits: 3**

**HIS 318 - History of U.S. Women Credits: 3**

**HIS 319 - Introduction to Public History Credits: 3**

**HIS 320 - Europe in the Early and High Middle Ages: 300 to 1270 Credits: 3**

**HIS 321 - Late Medieval Europe: 1270 to 1517 Credits: 3**

**HIS 325 - History of the Tsarist Russia Credits: 3**

**HIS 326 - History of the U.S.S.R. Credits: 3**

**HIS 330 - History of Modern Germany: 1919 to Present Credits: 3**

**HIS 331 - History of Modern France: 1750 to Present Credits: 3**

**HIS 332 - English History: 1066 to Present Credits: 3**

**HIS 334 - Europe 1715-1815: The Era of the Industrial and French  
Revolutions Credits: 3**

**HIS 337 - History of the Byzantine Empire Credits: 3**

**HIS 338 - Colonial America Credits: 3**

**HIS 339 - The Central Islamic Lands, 500-1700 Credits: 3**

**HIS 341 - African-American History Credits: 3**

**HIS 342 - U.S. Immigration and Ethnicity Credits: 3**

**HIS 344 - History of the Modern Middle East Credits: 3**

**HIS 345 - Military History of the United States Credits: 3**

**HIS 348 - The History of Ancient Rome Credits: 3**

**HIS 349 - History of Latin America Credits: 3**

**HIS 350 - History of Modern Japan Credits: 3**

**HIS 351 - World History since 1945 Credits: 3**

**HIS 352 - The US and Vietnam Credits: 3**

**HIS 353 - Modern Southeast Asia Credits: 3**

**HIS 354 - Traditional China Credits: 3**

**HIS 355 - History of Modern China Credits: 3**

**HIS 356 - History of 19th Century Europe Credits: 3**

**HIS 357 - History of Holocaust Credits: 3**

**HIS 358 - American Environmental History Credits: 3**

**HIS 359 - History of Western Political Thought, 1500-1800 Credits: 3**

**HIS 360 - History of Mexico Credits: 3**

**HIS 361 - History of 20th Century Europe Credits: 3**

**HIS 362 - Europe 1450-1715: The Era of the Renaissance and Reformation Credits: 3**

**HIS 363 - History of U.S. and World War II Credits: 3**

**HIS 366 - History of Brazil Credits: 3**

**HIS 376 - History of Africa South of the Sahara Credits: 3**

**HIS 382 - Selected Topics in History Credits: 1-3**

**HIS 383 - Selected Topics in History Credits: 1-3**

**HIS 384 - Selected Topics in History Credits: 1-3**

**HIS 385 - Selected Topics in History Credits: 3**

**HIS 386 - History Research Seminar Credits: 3**

**HIS 387 - History Internship Credits: 3**

**HIS 388 - Selected Topics in History Credits: 3**

**HIS 389 - History Internship Credits: 3**

**HIS 390 - Selected Topics in History Credits: 3**

**HIS 391 - History Internship Credits: 3-6**

**HIS 393 - Selected Topics in History Credits: 1-3**

**HIS 394 - Selected Topics in History Credits: 3**

**HIS 397 - Seminar in Comparative History Credits: 3**

**HIS 398 - Independent Study I in History Credits: 3**

**HIS 399 - Independent Study II in History Credits: 3**

**HIS 402 - Revolutionary America Credits: 3**

**HIS 407 - Women in Comparative Perspective Credits: 3**

**HIS 413 - Pennsylvania History Credits: 3**

**HIS 423 - Issues in 20th-Century Europe Credits: 3**

**HIS 428 - Issues in the Gilded Age and Progressive Era Credits: 3**

**HIS 430 - U.S. Cultural History Credits: 3**

**HIS 433 - Oral History Credits: 3**

**HIS 454 - China and the Outside World Credits: 3**

**HIS 460 - Archives and Public History Credits: 3**

**HIS 482 - Selected Topics in History Credits: 3**

**HIS 483 - Selected Topics in History Credits: 3**

**HIS 484 - Selected Topics in History Credits: 3**

**HIS 490 - Selected Topics in History Credits: 1-3**

**HIS 492 - Selected Topics in History Credits: 3**

**HIS 493 - Selected Topics in History Credits: 3**

**HIS 496 - Selected Topics in History Credits: 3**

## **Honors Program**

**HON 100 - Honors: Introduction to Human Communication Credits: 3**

**HON 101 - Honors: Introduction to the Theatre Credits: 3**

**HON 102 - Honors: Introduction to Women's Studies Credits: 3**

**HON 105 - Honors: Ethical Theories and Problems Credits: 3**

**HON 106 - Honors: Writing Intensive First-Year Seminar Credits: 3**

**HON 108 - Honors: Astronomy Credits: 3**

**HON 111 - Honors: Introduction to Interdisciplinary Arts Credits: 3**

**HON 122 - Honors: Historical Foundation of Global Cultures Credits: 3**

**HON 123 - Honors: Thinking Historically in a Global Age Credits: 3**

**HON 130 - Honors: Introduction to Philosophy Credits: 3**

**HON 135 - Honors: Art History III Credits: 3**

**HON 140 - Honors: Geography of the United States and Canada Credits: 3**

**HON 141 - Honors: World Geography Credits: 3**

**HON 142 - Honors: Introduction to the Atmosphere Credits: 3**

**HON 145 - Honors: Environmental Biology Credits: 3**

**HON 151 - Honors: General Psychology Credits: 3**

**HON 159 - Honors: Physical Anthropology Credits: 3**

**HON 160 - Honors: Cultural Anthropology Credits: 3**

**HON 161 - Honors: Introduction to Sociology: Society and Diversity Credits: 3**

**HON 162 - Honors: Contemporary Social Problems Credits: 3**

**HON 163 - Honors: Introduction to Archaeology Credits: 3**

**HON 165 - Honors: Principles of Macroeconomics Credits: 3**

**HON 166 - Honors: Principles of Microeconomics Credits: 3**

**HON 180 - Honors: Physics for Society Credits: 3**

**HON 182 - Honors: Overview of Computer Science Credits: 3**

**HON 186 - Honors: Human Biology Credits: 3**

**HON 187 - Honors Contemporary Issues in Biology Credits: 3**

**HON 190 - Honors: General Education Selected Topics Credits: 3**

**HON 196 - Honors: A Cultural Approach Credits: 3**

**HON 208 - Honors: Opera and Music Theatre Credits: 3**

**HON 210 - Honors: Introduction to Music Credits: 3**

**HON 224 - Honors: The Art of the Film Credits: 3**

**HON 235 - Honors: Introduction to Cultural Studio Credits: 3**

**HON 244 - Honors: Introduction to Geology Credits: 3**

**HON 249 - Honors: Introduction to Literature Credits: 3**

**HON 252 - Honors: Selected Topics in Psychology Credits: 3**

**HON 261 - Honors: World Music Credits: 3**

**HON 262 - Honors: Selected Topics in Sociology Credits: 3**

**HON 269 - Honors: Sociology of the Arts Credits: 3**

**HON 274 - Honors: Introduction to International Politics Credits: 3**

**HON 279 - Honors: U.S. Government and Politics Credits: 3**

**HON 350 - Honors: Selected Topics in Political Science Credits: 3**

**HON 360 - Honors Colloquium Credits: 1**

**HON 363 - Honors Colloquium Credits: 2**

**HON 392 - Honors Seminar Credits: 3**

**HON 393 - Honors Seminar Credits: 3**

**HON 394 - Honors: Selected Topics Credits: 3**

**HON 395 - Honors: Selected Topics Credits: 3**

**HON 396 - University Honors Colloquium Credits: 3**

**HON 397 - Honors: Selected Topics Credits: 3**

**HON 398 - Honors: Selected Topics Credits: 3**

**HON 399 - Honors: Independent Study Credits: 3**

**HON 411 - Honors: Introduction to Exceptionalities: Understanding Diverse Learners Credits: 3**

**HON 440 - Honors: Business and Society Credits: 3**

**HON 442 - Selected Topics in Honors Credits: 3**

**HON 497 - Honors: Strategic Management Credits: 3**

**Interdisciplinary Arts Program**

**IAP 111 - Introduction to Interdisciplinary Arts Credits: 3**

**IAP 190 - General Education Special Topics Credits: 3**

**IAP 399 - Independent Study in Interdisciplinary Arts Program Credits: 3**

**IAP 449 - Interdisciplinary Arts Senior Thesis Credits: 3**

**IAP 451 - Interdisciplinary Arts Showcase Credits: 3**

**IAP 452 - Interdisciplinary Arts Internship Credits: 3**

**IAP 453 - Interdisciplinary Arts Internship Credits: 3**

## **International Studies**

**INT 190 - General Education Special Topics Credits: 3**

**INT 200 - Introduction to International Studies Credits: 3**

**INT 280 - Selected Topics in International Studies: Comparative & Global Cultures Credits: 3-6**

**INT 281 - Selected Topics in International Studies: Global Political Relations Credits: 3-6**

**INT 282 - Selected Topics in International Studies Global Business & Economics Credits: 3-6**

**INT 283 - Selected Topics in International Studies Africa & Middle East Studies Credits: 3-6**

**INT 284 - Selected Topics International Studies Asian Studies Credits: 3-6**

**INT 285 - Selected Topics in International Studies European Studies Credits: 3-6**

**INT 286 - Selected Topics in International Studies Latin American & Caribbean Studies Credits: 3-6**

**INT 300 - International Studies Seminar Credits: 3**

**INT 380 - Selected Topics in International Studies Comparative & Global Cultures Credits: 3-6**



**INT 381 - Selected Topics in International Studies Global Political Relations  
Credits: 3-6**

**INT 382 - Selected Topics in International Studies Global Business &  
Economics Credits: 3-6**

**INT 383 - Selected Topics in International Studies Africa & Middle East  
Studies Credits: 3-6**

**INT 384 - Selected Topics in International Studies Asian Studies Credits: 3-  
6**

**INT 385 - Selected Topics in International Studies European Studies  
Credits: 3-6**

**INT 386 - Selected Topics in International Studies Latin American &  
Caribbean Studies Credits: 3-6**

**INT 390 - International Studies Internship - Comparative & Global Cultures  
Credits: 3-6**

**INT 391 - International Studies Internship - Global Political Relations  
Credits: 3-6**

**INT 392 - International Studies Internship - Global Business & Economics  
Credits: 3-6**

**INT 393 - International Studies Internship - African & Middle Eastern  
Studies Credits: 3-6**

**INT 394 - International Studies Internship - Asian Studies Credits: 3-6**

**INT 395 - International Studies Internship - European Studies Credits: 3-6**

**INT 396 - International Studies Internship - Latin American & Caribbean  
Studies Credits: 3-6**

## **Mathematics**

**MAT 050 - Developmental Mathematics Credits: 3**

**MAT 105 - Mathematics for Liberal Studies Credits: 3**

**MAT 107 - Mathematical Models Applied to Money Credits: 3**

**MAT 110 - Fundamentals of Mathematics I Credits: 3**

**MAT 111 - Fundamentals of Mathematics II Credits: 3**

**MAT 117 - Applied Statistics Credits: 3**

**MAT 140A - College Algebra Credits: 4**

**MAT 140B - College Algebra Credits: 3**

**MAT 175 - Precalculus Credits: 3**

**MAT 181 - Applied Calculus Credits: 3**

**MAT 185 - First Year Mathematics Seminar Credits: 1**

**MAT 190 - General Education Special Topics Credits: 3**

**MAT 191 - General Education Special Topics Credits: 3**

**MAT 205 - Conceptual Mathematics for Middle-Level Teachers Credits: 3**

**MAT 211 - Calculus I Credits: 4**

**MAT 212 - Calculus II Credits: 4**

**MAT 213 - Calculus III Credits: 4**

**MAT 217 - Statistics I Credits: 4**

**MAT 219 - Data Science I Credits: 3**

**MAT 225 - Discrete Mathematics Credits: 4**

**MAT 317 - Statistics II Credits: 3**

**MAT 318 - Elementary Linear Algebra Credits: 3**

**MAT 319 - Data Science II Credits: 3**

**MAT 320 - Introduction to Abstract Algebra Credits: 3**

**MAT 322 - Differential Equations Credits: 3**

**MAT 326 - Mathematical Modeling Credits: 3**

**MAT 333 - Geometry Credits: 3**

**MAT 375 - Probability and Statistics for Engineers Credits: 4**

**MAT 393 - Selected Topics in Mathematics Credits: 1-3**

**MAT 395 - Mathematics Internship Credits: 3**

**MAT 396 - Mathematics Internship Credits: 3**

**MAT 399 - Independent Study in Mathematics Credits: 3**

**MAT 400 - History of Mathematics Credits: 3**

**MAT 410 - Numerical Analysis Credits: 3**

**MAT 421 - Number Theory and Cryptography Credits: 3**

**MAT 422 - Partial Differential Equations Credits: 3**

**MAT 425 - Advanced Algebraic Structures Credits: 3**

**MAT 430 - Complex Analysis Credits: 3**

**MAT 441 - Real Analysis I Credits: 3**

**MAT 450 - Combinatorics Credits: 3**

**MAT 456 - Deterministic Methods of Operations Research Credits: 3**

**MAT 476 - Probability Credits: 3**

**MAT 486 - Mathematical Statistics Credits: 3**

**MAT 490 - Selected Topics in Mathematics Credits: 3**

**MAT 491 - Topics in Applied Mathematics Credits: 3**

**MAT 492 - Selected Topics in Mathematics Credits: 3**

**MAT 493 - Topics in Applied Mathematics Credits: 3**

**MAT 499 - Independent Study in Mathematics Credits: 3**

**Management**

**MGT 305 - Organizational Behavior Credits: 3**

**MGT 331 - Principles of Management Credits: 3**

**MGT 340 - Human Resource Management Credits: 3**

**MGT 342 - Labor Relations and Collective Bargaining Credits: 3**

**MGT 346 - Human Resource Management Law Credits: 3**

**MGT 348 - Compensation Administration Credits: 3**

**MGT 349 - International Human Resource Management Credits: 3**

**MGT 370 - International Business Credits: 3**

**MGT 393 - Selected Topics in Management Credits: 3**

**MGT 394 - Leadership and Decision-Making Credits: 3**

**MGT 447 - Business and Society Credits: 3**

**MGT 450 - Negotiation Credits: 3**

**MGT 470 - International Management Credits: 3**

**MGT 490 - Selected Topics in Management Credits: 1-3**

**MGT 491 - Selected Topics in Management Credits: 3**

**MGT 497 - Strategic Management Credits: 3**

**MGT 498 - Strategy Implementation Credits: 3**

## **Military Science**

**MIL 131 - Military Science I (2 crs.) Credits: 2**

**MIL 132 - Military Science I Credits: 2**

**MIL 231 - Military Science II Credits: 2**

**MIL 232 - Military Science II Credits: 2**

**MIL 331 - Military Science III Credits: 2**

**MIL 332 - Military Science III Credits: 2**

**MIL 350 - Military Science IV Credits: 3**

**MIL 351 - Military Science IV Credits: 3**

**MIL 398 - Selected Topics in Military Science Credits: 3**

**MIL 399 - Seminar in Military Leadership Topics Credits: 3**

## **Management Information Systems**

**MIS 142 - Business Computer Systems Credits: 3**

**MIS 240 - Introduction to Programming Concepts Credits: 3**

**MIS 242 - Design and Development of User Information Systems Credits: 3**

**MIS 300 - Information Technology and Business Operations Credits: 3**

**MIS 340 - Business Programming Credits: 3**

**MIS 344 - Business Systems Analysis and Design Credits: 3**

**MIS 355 - Database Applications Credits: 3**

**MIS 393 - Selected Topics in Business Information Systems Credits: 3**

**MIS 399 - Introduction to Corporate Cybersecurity Credits: 3**

**MIS 420 - Telecommunications and Distributed Processing Credits: 3**

**MIS 442 - Electronic Commerce and Technology Integration Credits: 3**

**MIS 446 - Applied Project Management Credits: 3**

**MIS 490 - Selected Topics in Business Information Systems Credits: 3**

## **Marketing**

**MKT 305 - Principles of Marketing Credits: 3**

**MKT 306 - Buyer Behavior Credits: 3**

**MKT 310 - Personal Selling Credits: 3**

**MKT 315 - Sales Management Credits: 3**

**MKT 325 - Advertising and Promotional Strategy Credits: 3**

**MKT 335 - E-Marketing Credits: 3**

**MKT 340 - Tourism and Events Planning Credits: 3**

**MKT 342 - Business-to-Business Marketing and Analysis Credits: 3**

**MKT 352 - Principles of Retailing Credits: 3**

**MKT 360 - International Marketing Credits: 3**

**MKT 365 - Relationship Marketing Credits: 3**

**MKT 370 - Services Marketing Credits: 3**

**MKT 380 - Sports Marketing Credits: 3**

**MKT 390 - Selected Topics in Marketing Credits: 1-3**

**MKT 391 - Selected Topics in Marketing Credits: 3**

**MKT 393 - Selected Topics in Marketing Credits: 3**

**MKT 399 - Independent Study in Marketing Credits: 3**

**MKT 430 - Marketing Research Credits: 3**

**MKT 490 - Selected Topics in Marketing Credits: 1-3**

**MKT 493 - Selected Topics in Marketing Credits: 3**

**MKT 495 - Marketing Analysis and Strategy Development Credits: 3**

## **Mechanical Engineering**

**MECH 200 - Statics Credits: 3**

**MECH 210 - Dynamics Credits: 4**

**MECH 220 - Fluids Credits: 4**

**MECH 300 - Engineering Materials Credits: 4**

**MECH 310 - Manufacturing Processes Credits: 4**

**MECH 400 - Design Methods Credits: 4**

**MECH 410 - Mechanics of Thermodynamics Credits: 4**

## **Music**

**MUS 101 - Brass Ensemble Credits: 1**

**MUS 103 - Marching Band Credits: 1**

**MUS 104 - Concert Band Credits: 1**

**MUS 105 - Concert Choir Credits: 1**

**MUS 107 - Women's Chorale Credits: 1**

**MUS 109 - String Ensemble Credits: 1**

**MUS 110 - Fundamental Music Skills Credits: 3**

**MUS 113 - Jazz Ensemble Credits: 1**

**MUS 117 - Madrigal Singers Credits: 1**

**MUS 121 - Introduction to Music Credits: 3**

**MUS 129 - American Popular Music Credits: 3**

**MUS 132 - University-Community Orchestra Credits: 1**

**MUS 140 - Class Piano, Level I Credits: 3**

**MUS 150 - Basic Guitar Credits: 3**

**MUS 158 - Woodwind Ensemble Credits: 1**

**MUS 190 - General Education Special Topics Credits: 3**

**MUS 212 - Music Theory I Credits: 3**

**MUS 227 - Opera and Music Theatre Credits: 3**

**MUS 260 - Voice Class, Level I Credits: 3**

**MUS 261 - World Music Credits: 3**

**MUS 270 - Brass Instrument Class Credits: 3**

**MUS 272 - Strings Class Credits: 3**

**MUS 312 - Music Theory II Credits: 3**

**MUS 315 - Music in the United States Credits: 3**

**MUS 320 - Masterpieces of Music Credits: 3**

**MUS 340 - Class Piano, Level II Credits: 3**

**MUS 380 - Basic Conducting Credits: 3**

**MUS 393 - Selected Topics in Music Credits: 1-3**

**MUS 399 - Selected Topics in Music/Theater Arts Credits: 3**

**MUS 490 - Selected Topics in Music Credits: 1-3**

## **Philosophy**

**PHL 101 - Introduction to Philosophy Credits: 3**

**PHL 102 - Critical Thinking Credits: 3**

**PHL 105 - Ethical Theories and Problems Credits: 3**

**PHL 190 - General Education Special Topics Credits: 3**

**PHL 230 - The Ethics of War and Terrorism Credits: 3**

**PHL 240 - Ethical Issues and the Media Credits: 3**

**PHL 248 - History of Ancient and Medieval Philosophy Credits: 3**

**PHL 249 - History of Modern Philosophy Credits: 3**

**PHL 285 - Philosophy of Science Credits: 3**

**PHL 295 - Comparative Religions Credits: 3**



**PHL 301 - Formal Logic Credits: 3**

**PHL 332 - Ethical Issues and Computer Technology Credits: 3**

**PHL 336 - Concepts in Buddhism Credits: 3**

**PHL 337 - Existentialism Credits: 3**

**PHL 340 - Contemporary Ethics Credits: 3**

**PHL 391 - Selected Topics in Philosophy Credits: 3**

**PHL 393 - Selected Topics in Philosophy Credits: 1-3**

**PHL 394 - Selected Topics in Philosophy Credits: 3**

**PHL 399 - Independent Study in Philosophy Credits: 3**

**PHL 490 - Selected Topics in Philosophy Credits: 1-3**

## **Physics**

**PHY 107 - 1st Year Seminar for Physics Majors Credits: 2**

**PHY 108 - Astronomy Credits: 3**

**PHY 110 - Physics for Society Credits: 3**

**PHY 121 - Introductory Physics I - Lecture Credits: 3**

**PHY 122 - Introductory Physics II - Lecture Credits: 3**

**PHY 123 - Physics I Laboratory Credits: 1**

**PHY 125 - Physics II Laboratory Credits: 1**

**PHY 190 - General Education Special Topics Credits: 3**

**PHY 205 - Intermediate Physics I Credits: 3**

**PHY 206 - Intermediate Physics II Credits: 3**

**PHY 221 - Fundamentals of Physics I Credits: 5**

**PHY 222 - Fundamentals of Physics II Credits: 5**

**PHY 301 - Mathematical and Numerical Techniques in the Sciences Credits: 4**

**PHY 311 - Quantum I Credits: 4**

**PHY 321 - Electricity and Magnetism I Credits: 4**

**PHY 325 - Semiconductor Devices Credits: 4**

**PHY 331 - Mechanics I Credits: 4**

**PHY 341 - Classical and Statistical Thermodynamics Credits: 4**

**PHY 355 - Electronics Credits: 4**

**PHY 390 - Internship Physics I Credits: 3**

**PHY 393 - Selected Topics in Physics Credits: 1-3**

**PHY 395 - Internship II Credits: 3**

**PHY 397 - Intro to Research Credits: 3**

**PHY 398 - Research II Credits: 3**

**PHY 399 - Independent Study in Physics Credits: 3**

**PHY 411 - Quantum II Credits: 3**

**PHY 421 - Electricity and Magnetism II Credits: 3**

**PHY 431 - Mechanics II Credits: 3**

**PHY 450 - Quantum Materials Credits: 4**

**PHY 461 - Mathematical Physics Credits: 3**

**PHY 471 - Computational Physics Credits: 4**

**PHY 481 - Atoms and Photons Credits: 3**

**PHY 485 - Optics Credits: 4**

**PHY 491 - Selected Topics in Physics Credits: 3**

**PHY 493 - Selected Topics in Physics Credits: 3**

**PHY 495 - Independent Study in Physics Credits: 2**

## **Political Science**

**PLS 100 - U.S. Government and Politics Credits: 3**

**PLS 141 - World Politics Credits: 3**

**PLS 190 - General Education Special Topics Credits: 3**

**PLS 201 - Foundations of Political Science: Concepts and Critical Analysis Credits: 3**

**PLS 202 - Applications in Public Affairs Credits: 3**

**PLS 231 - State and Local Government Credits: 3**

**PLS 251 - Introduction to Comparative Politics Credits: 3**

**PLS 252 - Costa Rica: Politics, Economy and Society Credits: 3**

**PLS 271 - Introduction to Public Administration Credits: 3**

**PLS 291 - Contemporary Issues Credits: 3**

**PLS 300 - Advanced American Government and Public Policy Credits: 3**

**PLS 301 - Political Science Research Methods Credits: 3**

**PLS 302 - Public Policy Analysis Credits: 3**

**PLS 307 - Applied Research in Political Science Credits: 1-3**

**PLS 311 - The Legislative Process Credits: 3**

**PLS 312 - The American Presidency Credits: 3**

**PLS 313 - The Judicial Process Credits: 3**

**PLS 321 - Public Opinion and Political Media Credits: 3**

**PLS 322 - Interest Groups in American Society Credits: 3**

**PLS 323 - Campaigns, Elections & Political Parties Credits: 3**

**PLS 324 - Women in American Politics Credits: 3**

**PLS 325 - African American Politics Credits: 3**

**PLS 331 - Urban Politics & Administration Credits: 3**

**PLS 333 - Applications in State and Local Public Policy Credits: 3**

**PLS 341 - International Law and Organization Credits: 3**

**PLS 342 - American Foreign Policy Credits: 3**

**PLS 343 - Global Economic and Political Conflict Credits: 3**

**PLS 347 - Applied Diplomacy Credits: 3**

**PLS 348 - Applied Diplomacy Credits: 3**

**PLS 349 - Applied Diplomacy Credits: 3**

**PLS 351 - European Politics Credits: 3**

**PLS 356 - Politics of Developing Regions Credits: 3**

**PLS 357 - Comparative Revolutions Credits: 3**

**PLS 358 - European Political Economy and Security Credits: 3**

**PLS 359 - European Political Integration and Identity Credits: 3**

**PLS 361 - Political Theory from Ancient Times through the 19th Century Credits: 3**

**PLS 362 - Contemporary Political Ideologies Credits: 3**

**PLS 363 - American Political Thought Credits: 3**

**PLS 365 - Constitutional Law: The Federal System Credits: 3**

**PLS 366 - Constitutional Law: First Amendment Freedoms Credits: 3**

**PLS 367 - Constitutional Law: Criminal Law and Equal Protection Credits: 3**

**PLS 371 - Public Management Credits: 3**

**PLS 372 - Public Personnel Administration Credits: 3**

**PLS 373 - Public Financial Administration Credits: 3**

**PLS 374 - Public Service Ethics Credits: 3**

**PLS 381 - Principles of Labor Relations Credits: 3**

**PLS 389 - Selected Topics in Public Administration Credits: 3**

**PLS 390 - Selected Topics in Political Science Credits: 3**

**PLS 391 - Selected Topics in Political Science Credits: 1-3**

**PLS 392 - Selected Topics in Political Science Credits: 3**

**PLS 393 - Selected Topics in Political Science Credits: 3**

**PLS 394 - Selected Topics in International Politics Credits: 3**

**PLS 395 - Internship I Credits: 3**

**PLS 396 - Internship II Credits: 3**

**PLS 397 - Internship III Credits: 3-6**

**PLS 398 - Independent Study in Political Science Credits: 3**

**PLS 399 - Senior Seminar Credits: 3**

**PLS 431 - Pennsylvania Local Government Credits: 3**

**PLS 490 - Selected Topics in Political Science Credits: 3**

**PLS 491 - Selected Topics in Political Science Credits: 3**

**PLS 492 - Selected Topics in Political Science Credits: 3**

## **Psychology**

**PSY 101 - General Psychology Credits: 3**

**PSY 105 - Research Design and Statistics for the Behavioral Sciences I  
Credits: 3**

**PSY 205 - Research Design and Statistics for the Behavioral Sciences II  
Credits: 3**

**PSY 235 - Conditioning and Learning Credits: 3**

**PSY 240 - Psychology of Personality Credits: 3**

**PSY 250 - Psychology of Life Span Development Credits: 3**

**PSY 265 - Childhood and Adolescence Credits: 3**

**PSY 270 - Social Psychology Credits: 3**

**PSY 301 - Experimental Psychology Credits: 3**

**PSY 311 - Applied Behavior Analysis Credits: 3**

**PSY 315 - Psychology of Prejudice and the Minority Experience Credits: 3**

**PSY 320 - Behavioral Neuroscience Credits: 3**

**PSY 323 - Sensation and Perception Credits: 3**

**PSY 325 - Psychology of Human Cognition Credits: 3**

**PSY 330 - Abnormal Psychology Credits: 3**

**PSY 335 - Psychology of Social Influence Credits: 3**

**PSY 340 - Introduction to Clinical Psychology Credits: 3**

**PSY 350 - Psychology of Sustainability Credits: 3**

**PSY 352 - Adulthood and Aging Credits: 3**

**PSY 355 - Psychology of the Exceptional Child Credits: 3**

**PSY 361 - Psychology of Group Interaction Credits: 3**

**PSY 365 - Multicultural Psychology Credits: 3**

**PSY 374 - Advanced Research in Psychology I Credits: 3**

**PSY 375 - Advanced Research in Psychology II Credits: 3**

**PSY 379 - Capstone Seminar in Psychology Credits: 3**

**PSY 381 - Honor Thesis I Credits: 3**

**PSY 382 - Honor Thesis II Credits: 3**

**PSY 383 - Children's Understanding of Their Social World Credits: 3**

**PSY 384 - Psychology of Person-to-Person Interaction Credits: 3**

**PSY 385 - Internship in Psychology Credits: 1-4**

**PSY 386 - Internship in Psychology Credits: 3**

**PSY 389 - Internship in Psychology III Credits: 3**

**PSY 393 - Selected Topics in Psychology Credits: 1-3**

**PSY 394 - Seminar in Selected Topics I Credits: 3**

**PSY 395 - Seminar in Selected Topics Credits: 3**

**PSY 398 - Independent Study in Psychology Credits: 3**

**PSY 399 - Independent Study in Psychology Credits: 3**

**PSY 410 - Psychology and Women Credits: 3**

**PSY 420 - Health Psychology Credits: 3**

**PSY 432 - The Psychology of Computers and the Internet Credits: 3**

**PSY 435 - Psychopharmacology Credits: 3**

**PSY 440 - History and Systems of Psychology Credits: 3**

**PSY 445 - Psychology of Thinking Credits: 3**

**PSY 447 - Multicultural Health Psychology Credits: 3**

**PSY 450 - Crisis Intervention Credits: 3**

**PSY 470 - Legal Psychology Credits: 3**

**PSY 475 - Industrial and Organizational Psychology Credits: 3**

**PSY 485 - Tests and Measurements Credits: 3**

**PSY 490 - Selected Topics in Psychology Credits: 1-3**

**PSY 491 - Selected Topics in Psychology Credits: 3**

**PSY 492 - Selected Topics in Psychology Credits: 3**

**PSY 493 - Selected Topics in Psychology Credits: 3**

## **Reading**

**RDG 050 - Developmental Reading and Study Skills Credits: 3**

**RDG 232 - Reading in the Elementary School Credits: 3**

**RDG 323 - Processes of Word/Text/Comprehension in Grades 1-4 Credits: 3**

**RDG 329 - Reading in the Content Areas Credits: 3**

**RDG 330 - Content Area Reading in the Primary Grades Credits: 3**

**RDG 334 - Classroom Based Literacy Assessment Credits: 3**

**RDG 340 - Seminar in Literacy Tutoring Credits: 3**

**RDG 345 - Teaching Language Arts in PreK-4 Classroom Credits: 3**

**RDG 350 - Text Accessibility and Comprehension in the PK-4 Classroom  
Credits: 3**

**RDG 363 - Reading and Writing in PK-4 Credits: 3**

**RDG 383 - English Language Learners in PK-4 Credits: 2**

**RDG 393 - Selected Topics in Reading Credits: 3**

**RDG 413 - Teaching Reading to English Language Learners Credits: 3**

**RDG 422 - Studies in Children's Literature Credits: 3**

**RDG 431 - Seminar on Selected Topics in Reading Credits: 3**



**RDG 443 - Reading Measures and Interventions in PK-4 Credits: 4**

**RDG 490 - Selected Topics in Reading Credits: 1-3**

**RDG 491 - Selected Topics in Reading Credits: 1**

**RDG 492 - Selected Topics in Reading Credits: 3**

**RDG 493 - Selected Topics in Reading Credits: 1**

## **Supply Chain Management**

**SCM 200 - Statistical Applications in Business Credits: 3**

**SCM 315 - Strategic Procurement Credits: 3**

**SCM 330 - Supply Chain and Operations Management Credits: 3**

**SCM 355 - Managing Quality and Continuous Improvement Credits: 3**

**SCM 370 - Integrated Supply Chain Systems Credits: 3**

**SCM 380 - Data Mining for Supply Chain Management Credits: 3**

**SCM 390 - Strategic Warehouse Management Credits: 3**

**SCM 393 - Selected Topics in Supply Chain Management Credits: 1-3**

**SCM 410 - Distribution Systems in Supply Chains Credits: 3**

**SCM 420 - Global Logistics Systems Credits: 3**

**SCM 481 - Decision Models for Supply Chain Management Credits: 3**

**SCM 490 - Selected Topics in Supply Chain Management Credits: 1-3**

## **Sociology**

**SOC 101 - Introduction to Sociology: Society and Diversity Credits: 3**

**SOC 190 - General Education Special Topics Credits: 3**

**SOC 201 - Sociological Practice Credits: 3**

**SOC 220 - Social Stratification Credits: 3**

**SOC 243 - Minority Groups Credits: 3**

**SOC 244 - Criminology Credits: 3**

**SOC 245 - Juvenile Delinquency Credits: 3**

**SOC 248 - Sociology of Religion Credits: 3**

**SOC 257 - Sociological Patterns of Courtship and Marriage Credits: 3**

**SOC 258 - Women's Roles and Status Credits: 3**

**SOC 265 - Global Society Credits: 3**

**SOC 275 - Sociology of Sport and Leisure Credits: 3**

**SOC 320 - Sociology of Disability Credits: 3**

**SOC 331 - Internship I Credits: 3**

**SOC 332 - Internship II Credits: 3**

**SOC 335 - Internship III Credits: 6**

**SOC 344 - Sociology of Death Credits: 3**

**SOC 345 - Deviance and Social Control Credits: 3**

**SOC 346 - City and Community Credits: 3**

**SOC 351 - Race Relations Credits: 3**

**SOC 354 - Social Movements and Social Change Credits: 3**

**SOC 359 - Selected Topics in Sociology Credits: 3**

**SOC 360 - Sociology Special Topics II Credits: 3**

**SOC 363 - Population Problems Credits: 3**

**SOC 365 - Elites in Society Credits: 3**

**SOC 369 - Medical Sociology Credits: 3**

**SOC 370 - Sociology of the Arts Credits: 3**

**SOC 371 - Social Dynamics of Aging Credits: 3**

**SOC 375 - Sociology of Media & Culture Credits: 3**

**SOC 380 - Classical Social Theory Credits: 3**

**SOC 385 - Introduction to Social Research Credits: 3**

**SOC 386 - Data Collection and Analysis Credits: 3**

**SOC 391 - Violence: A Sociological Perspective Credits: 3**

**SOC 394 - Selected Topics in Sociology Credits: 3**

**SOC 398 - Independent Study in Sociology I Credits: 3**

**SOC 399 - Independent Study in Sociology II Credits: 3**

**SOC 410 - Family and Society Credits: 3**

**SOC 415 - Senior Seminar Credits: 3**

**SOC 421 - Impact of International Migration Credits: 3**

**SOC 435 - Gender, Organizations, and Leadership Credits: 3**

**SOC 440 - Global Leadership for Global Society Credits: 3**

**SOC 445 - Sexuality and Sexual Orientation: A Social Approach Credits: 3**

**SOC 486 - Qualitative Social Research Credits: 3**

**SOC 490 - Selected Topics in Sociology Credits: 1-3**

**SOC 491 - Selected Topics in Sociology Credits: 3**

**SOC 493 - Selected Topics in Sociology Credits: 3**

## **Spanish**

**SPN 101 - Beginning Spanish I Credits: 3**

**SPN 102 - Beginning Spanish II Credits: 3**

**SPN 103 - Intermediate Spanish Credits: 3**

**SPN 150 - Spanish Civilization and Culture Credits: 3**

**SPN 152 - Latino Literature Credits: 3**

**SPN 153 - Latino Pop Culture Credits: 3**

**SPN 190 - General Education Special Topics Credits: 3**

**SPN 202 - Intermediate Conversation Credits: 3**

**SPN 204 - Ideas and Cultures from the Spanish-Speaking World Credits: 3**

**SPN 211 - Intermediate Contextualized Grammar Credits: 3**

**SPN 215 - Intermediate Spanish For Heritage and Native Speakers Credits:  
3**

**SPN 302 - Advanced Spanish Conversation Credits: 3**

**SPN 309 - Spanish Phonetics Credits: 3**

**SPN 312 - Advanced Contextualized Grammar Credits: 3**

**SPN 313 - Advanced Composition and Stylistics Credits: 3**

**SPN 330 - Spanish for the Professions Credits: 3**

**SPN 343 - Introduction to Literary Studies Credits: 3**

**SPN 360 - Masterpieces of Spanish Literature Credits: 3**

**SPN 361 - Masterpieces of Spanish-American Literature Credits: 3**

**SPN 385 - Aspectos De La Civilización Hispana Credits: 3**

**SPN 388 - Spanish Internship I Credits: 3**

**SPN 389 - Spanish Internship II Credits: 3**

**SPN 399 - Independent Study in Spanish Credits: 3**

**SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature  
Credits: 3**

**SPN 401 - Seminar: Advanced Studies in Spanish Language and Literature II Credits: 3**

**SPN 406 - Seminar: Advanced Studies in Spanish Language and Literature Credits: 3**

**SPN 410 - Internship for Students of Spanish Credits: 1**

**SPN 420 - Theory and Practice of Translation Credits: 3**

**SPN 425 - Advanced Oral Interpreting Credits: 3**

**SPN 490 - Selected Topics in Spanish Credits: 3**

**SPN 491 - Selected Topics in Spanish Credits: 3**

**SPN 492 - Selected Topics in Spanish Credits: 3**

**SPN 493 - Selected Topics in Spanish Credits: 3**

**SPN 494 - Selected Topics in Spanish Credits: 3**

**SPN 495 - Selected Topics in Spanish Credits: 3**

## **Software Engineering**

**SWE 200 - Design Patterns Credits: 4**

**SWE 300 - Crafting Quality Code Credits: 4**

**SWE 400 - Large Scale Architectures Credits: 4**

**SWE 415 - Interdisciplinary Development Credits: 4**

**SWE 420 - Extreme Programming Credits: 4**

## **Social Work**

**SWK 102 - Social Work in Social Welfare Credits: 3**

**SWK 150 - Human Relations Lab Credits: 3**

**SWK 250 - Assessing Individuals in the Social Environment Credits: 3**

**SWK 262 - Social Work Elective: Introduction to Child Welfare Practice Credits: 3**

**SWK 265 - Understanding Diversity for Social Work Practice Credits: 3**

**SWK 270 - Social Work Practice with Individuals Credits: 3**

**SWK 327 - Social Work Practice with Families Credits: 3**

**SWK 340 - Assessing Organizations and Communities in Society Credits: 3**

**SWK 347 - Special Fields of Social Work: Behavioral Health Credits: 3**

**SWK 348 - Special Fields of Social Work: Substance Abuse Credits: 3**

**SWK 351 - Social Work Elective: Aging Credits: 3**

**SWK 356 - Social Work Elective: Intellectual and Developmental Disabilities Credits: 3**

**SWK 357 - Special Fields of Social Work: Health Care Credits: 3**

**SWK 358 - Special Fields of Social Work: Schools Credits: 3**

**SWK 359 - Social Work Elective: Violence in Interpersonal Relationships Credits: 3**

**SWK 360 - Research Techniques for Social Workers Credits: 3**

**SWK 370 - Social Work Practice with Organizations and Communities Credits: 3**

**SWK 375 - Social Work Skills for Working with Groups Credits: 3**

**SWK 383 - Selected Topics in Social Welfare Credits: 1-3**

**SWK 384 - Selected Topics in Social Work Credits: 3**

**SWK 385 - Selected Topics in Social Work Credits: 1**

**SWK 388 - Preparation for Practicum Credits: 1**

**SWK 399 - Independent Study in Social Work Credits: 3**

**SWK 420 - Gender Issues for Helping Professionals Credits: 3**

**SWK 450 - Social Welfare Policies and Services Credits: 3**

**SWK 460 - Field Work in Social Work I Credits: 6**

**SWK 461 - Field Work in Social Work II Credits: 6**

**SWK 462 - Seminar in Social Work Methods Credits: 3**

**SWK 490 - Selected Topics in Social Welfare Credits: 1-3**

**SWK 491 - Selected Topics in Social Work Credits: 3**

**SWK 492 - Selected Topics in Social Work Credits: 3**

## **Teacher Education**

**TCH 205 - The American School Credits: 3**

**TCH 206 - Social Foundations of Middle Level Education Credits: 3**

**TCH 207 - Organizational and Psychological Foundations in Secondary Education Credits: 3**

**TCH 250 - Elements of Instruction Credits: 3**

**TCH 251 - Elements of Middle Level Instruction Credits: 3**

**TCH 255 - Multicultural Issues and Strategies in Basic Education Credits: 3**

**TCH 260 - Educational Psychology Credits: 3**

**TCH 261 - Adolescent Development and Adolescent Learning Theory Credits: 3**

**TCH 303 - Books and Materials for Children Credits: 3**

**TCH 321 - Language and Reading in the Elementary School Credits: 3**

**TCH 322 - Teaching Middle Level Language Arts Credits: 3**

**TCH 341 - Mathematics in the Elementary School Credits: 3**

**TCH 342 - Teaching Middle Level Mathematics Credits: 3**

**TCH 345 - Assessment and Evaluation Strategies Credits: 3**

**TCH 346 - Science in the Elementary School Credits: 3**

**TCH 347 - Social Studies in the Elementary School Credits: 3**

**TCH 348 - Teaching Middle Level Social Studies Credits: 3**

**TCH 366 - Teaching Science at the Middle Level Credits: 3**

**TCH 393 - Selected Topics in Elementary Education Credits: 1-3**

**TCH 395 - Internship Credits: 1**

**TCH 399 - Independent Study in Teacher Education Credits: 2**

**TCH 423 - Integrating Literature in Middle Grades Credits: 3**

**TCH 445 - Strategies for Effective Classroom Management Credits: 3**

**TCH 490 - Selected Topics in Teacher Education Credits: 1-3**

**TCH 491 - Selected Topics in Teacher Education Credits: 3**

**TCH 492 - Selected Topics in Teacher Education Credits: 3**

**TCH 493 - Selected Topics in Teacher Education Credits: 3**

**TCH 494 - Selected Topics in Teacher Education Credits: 3**

**TCH 495 - Selected Topics in Teacher Education Credits: 3**

**TCH 496 - Selected Topics in Teacher Education Credits: 3**

**TCH 497 - Selected Topics in Teacher Education Credits: 3**

**TCH 498 - Selected Topics in Teacher Education Credits: 3**

**TCH 499 - Selected Topics in Teacher Education Credits: 3**

## **Theatre Arts**

**THE 121 - Introduction to the Theatre Credits: 3**

**THE 122 - Acting I: Fundamentals of Acting Credits: 3**

**THE 190 - General Education Special Topics Credits: 3**



**THE 222 - Acting II: Scene Study and Analysis Credits: 3**

**THE 229 - Introduction to Technical Production Credits: 3**

**THE 322 - Voice and Movement for the Stage Credits: 3**

**THE 323 - Children's Theatre Credits: 3**

**THE 324 - Theatre Practicum Credits: 3**

**THE 327 - Costumes and Make-Up Credits: 3**

**THE 329 - Theatre History Credits: 3**

**THE 393 - Selected Topics in Theater Arts Credits: 3**

**THE 395 - Theatre Internship Credits: 3**

**THE 396 - Theater Internship II Credits: 3**

**THE 490 - Selected Topics in Theatre Credits: 3**

**THE 491 - Selected Topics in Theater Arts Credits: 3**

## **Women's & Gender Studies**

**WST 100 - Introduction to Women's and Gender Studies Credits: 3**

**WST 190 - General Education Special Topics Credits: 3**

**WST 200 - Independent Study in Women's and Gender Studies Credits: 3**

**WST 300 - Seminar in Women's and Gender Studies Credits: 3**

**WST 390 - Internship in Women's and Gender Studies Credits: 3-6**

## **Faculty and Administration**

As of November, 2017

## **University Administration**

For the most current information on members of the Shippensburg University administration, please follow this link:

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