



SHIPPENSBURG
UNIVERSITY.

2014-2016 Graduate Catalog



SCHOOL OF GRADUATE STUDIES
ship.edu/graduate



2014-2016 GRADUATE CATALOG

Including curricula leading to the degrees of:

Master of Arts

Master of Arts in Teaching

Master of Business Administration

Master of Education

Master of Public Administration

Master of Science

Master of Social Work

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INTRODUCTION



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.

Mission of the School of Graduate Studies

Shippensburg University of Pennsylvania offers master's, post-baccalaureate, and post-master's programs that encourage intellectual excellence, research, and scholarship while emphasizing the development of applicable professional skills. The mission of the School of Graduate Studies is to create an atmosphere of intellectual curiosity, academic freedom, diversity, independent scholarship, and creative investigation for its students by offering programs that are:

- Current and flexible;
- Responsive to regional needs;
- Responsive to individual needs and career goals;
- High quality and affordable;
- Taught by qualified and engaged faculty;
- Applied and professional;
- Appropriately interdisciplinary;
- Designed to enhance critical analytic skills; and
- Focused on new concepts and best practices.

These programs are designed to provide advanced study that allows students to enter or advance within a profession, but they may also serve as preparation for pursuit of a doctorate or other advanced degree.

Goals and Objectives

Each program in the School of Graduate Studies embraces the values of quality, integrity, collaboration, efficiency, innovation, creativity, inclusiveness, and a belief in the actualization of individual potential. The programs build on the knowledge and skills gained in baccalaureate programs to prepare students for entry into professional fields, to ensure competence to perform at advanced professional levels, and to encourage lifelong learning in an increasingly diverse society. Academic excellence and the development of professional skills are achieved through a strong commitment to the following objectives:

- Varied and flexible course times and delivery;
- Close faculty/student relationships;
- An interactive learning environment;
- Opportunities for independent and collaborative scholarship;
- Appropriately sized classes;
- Applied practica and internships;
- Degree requirements that ensure academic integrity;
- Opportunities for integration of knowledge and the applications of technology;
- Fostering high ethical standards;
- Development of problem-solving skills.

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); 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).

Office of the Graduate Dean

The Office of the Graduate Dean, located in Old Main 310, provides a number of services to graduate students including coordination of graduate assistantships. Office hours are 8:00 a.m. to 4:30 p.m. Monday through Friday during the academic year. Summer hours are 8:00 a.m. to 4:00 p.m. Monday through Friday. To contact the office, call (717) 477-1148.

Office of Graduate Admissions

The Office of Graduate Admissions, located in Old Main 105, provides all services related to recruitment and admission

application processing. Office hours are 8:00 a.m. to 4:30 p.m., Monday through Friday. Contact the office by calling (717) 477-1231 or sending e-mail to gradsch@ship.edu.

Office of the Registrar

The Office of the Registrar, located in Old Main 110, provides the following services: scheduling and registration, verification of graduate enrollment, application for graduation, requests for withdrawal, and application for change of program, name, and address. Office hours are 8:00 a.m. to 4:30 p.m. Monday through Friday. Contact the office at (717) 477-1381.

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 Times

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

Harrisburg	1 hour
Frederick	1 hour
Baltimore	2 hours
Washington, D.C.	2 hours
Philadelphia	2.5 hours
Pittsburgh	3 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.

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

In compliance with state and federal laws, including Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and the Americans With Disabilities Act of 1990, Shippensburg University of Pennsylvania is committed to human understanding and provides equal educational, employment, and economic opportunities for all persons without regard to race, color, sex, national origin, age, or disability.

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
Maryrose Wilson
Benefits and Employee Services Manager/Interim Title IX Coordinator
Old Main 109, (717) 477-1124, mwilson@ship.edu

Department of Education

<http://www.ed.gov/ocr>

Contact via the Web: Contact the Office for Civil Rights

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 delivers services as outlined by the Pennsylvania State System of Higher Education (PASSHE) and by Shippensburg University's equity plans. Additionally, the office works in coordination with the Human Resources Office to provide accommodations to campus faculty and staff with diagnosed disabilities.

Located at 120 Horton Hall and 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, or contact the office at (717) 477-1364 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 2014-2015 and 2015-2016 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.

ADMISSION POLICIES AND PROCEDURES

Admission Policies

The following policies govern admission to all graduate degree programs.

In order to be considered for graduate study at Shippensburg University, you must present a bachelor's degree from a college or university that is accredited by the appropriate regional accrediting agency. Academic departments at their discretion may require an interview, résumé, writing sample, goal statement, letters of recommendation, testing such as the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT), or the Miller Analogies Test (MAT) or other requirements as departments deemed necessary.

As evidence of your ability to successfully complete a graduate program of study, you should have a cumulative undergraduate grade point average of at least 2.75 (a 2.8 minimum is required for the Master of Social Work; a 3.0 minimum is required for the Master of Education in Dual School Counseling and the M.Ed. in Reading) as determined by a grading system in which A equals 4.0 grade points. If you have less than a 2.75 undergraduate grade point average (or higher as noted by the program), you will be required to submit other evidence of your ability to successfully complete the program for which you are applying. This evidence may include a personal interview with the academic department and/or a standardized test.

Individual graduate degree programs may have their own specific requirements for admission. Information on these requirements may be found under the description of the degree program on the website at www.ship.edu/admissions/graduate or in the individual graduate program profile available in the Office of Admissions. If you are applying for a program in a field that is different from your undergraduate major, you may be required to take additional undergraduate courses as a condition of your admission. You will be notified of this at the time you are admitted. These courses, which do not count toward your degree requirements, should be completed early in your program of study. Please note that if you take undergraduate courses while a graduate student you will be charged graduate tuition and fees for those undergraduate courses.

Your application for admission will be reviewed by the academic department to which you are applying. The department will then make a recommendation to the Dean of the School of Graduate Studies. You will be officially notified of a decision by the Office of Graduate Admissions.

An offer of admission to graduate study requires you to matriculate and begin at Shippensburg University for the semester for which you have been admitted. If you do not matriculate by enrolling in graduate coursework at Shippensburg within that semester, you may defer your application for a maximum of one year. If the application is more than one year old, you must submit a new application and pay an additional application fee. You must confirm your offer of admission immediately upon receiving your letter of admission. Failure to do so will prohibit your ability to schedule and begin classes. Confirmation can be completed online through the Campus Information System; instructions are outlined in the letter of admission.

Students applying for a second master's degree or additional certification at Shippensburg University after an absence of more than one year must submit an updated application. No additional application fee is required.

Admission Procedures

Applicants for admission to Shippensburg University should apply online at www.ship.edu/graduate. They may also e-mail gradadmiss@ship.edu or call (717) 477-1213 or toll free 800-822-8028 the Office of Admissions and request a paper application.

Applications are accepted for the fall, spring, and summer terms. Complete and submit the application together with a non-refundable application fee of \$45 (subject to change) to the Office of Graduate Admissions. Checks should be made payable to Shippensburg University. You should make arrangements with other colleges and universities you have attended to have official transcripts sent to the Office of Graduate Admissions. You must submit transcripts from any institution where you have taken undergraduate or graduate credit. It is not necessary to submit a transcript of work taken at Shippensburg University.

Candidates are encouraged to submit applications as soon as possible to the degree program of choice. Please refer to the individual departmental descriptions or www.ship.edu/graduate for more specifics.

Examinations

Certain departments require you to present standardized test scores either as a regular admission requirement or for those students whose undergraduate quality point average is less than 2.75 (2.8 for the Master of Social Work, a 3.0 for the M.Ed in Dual School Counseling and M.Ed in Reading) on a 4.0 scale. Information on these requirements may be found under the description of the degree program. Please be aware some graduate programs have minimum GPA requirements higher than a 2.75 on a 4.0 scale and may not accept testing as an alternative.

Miller Analogies Test

Some departments require applicants to take the Miller Analogies Test (MAT). Shippensburg University is an official testing center for the MAT for NCS Pearson, Inc. Chicago, Illinois. Information regarding the test and the testing dates is available through the Placement Testing Office of Admissions or at ship.edu/testing. The fee for anyone who takes this test at Shippensburg University is \$75 (subject to change).

Graduate Record Examination

Some departments require applicants to take the Graduate Record Examination (GRE). Shippensburg University is an official testing center for the GRE **subject test only** for the Educational Testing Service of Princeton, New Jersey. Applications and information on the GRE General Test are available in the Office of Admissions and at www.ets.org/gre.

Graduate Management Admission Test

Applicants to the Master of Business Administration (MBA) may be required to submit official scores for the Graduate Management Admission Test (GMAT). Information regarding the test is available in the Office of Admissions and on the web at www.mba.com.

Conditional or Provisional Admission

Occasionally an applicant will present an undergraduate academic record and standardized test scores that do not provide evidence of his or her ability to successfully complete a graduate degree program. These applicants may request additional consideration based on special circumstances or other factors. The academic department may then recommend that the applicant be admitted on a conditional or provisional basis.

Conditional admission gives such students the opportunity to meet departmental administrative requirements (e.g., license/certifications/police clearances) or complete prerequisite coursework (which may include undergraduate courses) that may strengthen their academic background and prepare them to successfully complete graduate coursework. The academic department will require a certain number of credits to be completed with appropriate grades within one calendar year of matriculation. The student's status will then be reevaluated to determine if he/she should be admitted as a regular degree student.

Students who are currently enrolled in a bachelor's degree program but have not yet been awarded a degree may be granted conditional admission to their graduate program. Students in this category will be required to submit a finalized transcript showing the award of a bachelor's degree by a regionally accredited institution prior to the start of their first semester of coursework. Students who do not provide this transcript will have a HOLD place on their account and will be unable to schedule additional coursework.

Provisional admission gives such students the opportunity to demonstrate their ability to do coursework at the graduate level. The department will require a certain number of credits to be completed (generally six to nine credits) with appropriate grades. The student's status is then reevaluated at the end of the provisional semester to determine if he/she should be admitted as a regular degree student.

If a conditionally or provisionally admitted applicant does not complete the conditions or provisions of their admission in the manner set forth the student will be considered unable to meet the requirements and their application will be retroactively denied. Any student who has been denied admission must wait one full calendar year before reapplying to the institution.

Other Admission Categories

Non-Degree Students

If you are a college graduate not planning to enroll in a degree program, you may apply and register as a non-degree graduate student. You must complete the online graduate non-degree application in order to register. The application is available at <https://ssb.ship.edu/admiss>.

As a non-degree student, you may enroll for any graduate course for which you have the necessary prerequisite coursework, with the approval of the academic department offering the course. Certain courses may not be available to non-degree graduate students. Academic departments may restrict enrollment in their courses or give scheduling preference to majors.

If you are planning to pursue a degree program you should not enroll as a non-degree student. While non-degree students may subsequently apply for a degree program, there is no assurance

they will be admitted. Also, academic departments at their discretion may approve a maximum of nine credit hours of coursework (with grades of B or higher) taken in non-degree status to count toward the master's degree. Non-degree students are required to meet the minimum academic standards outlined under Academic Policies and Procedures. **Applicants who have been denied admission to a degree program may take classes as a non-degree student with the permission of the academic department offering the course(s) on a course-by-course basis.**

International Students

Applicants from outside the United States who do not hold immigrant visas or permanent resident/resident alien status must complete an international application for admission. You may complete an application online at www.ship.edu/admissions/international or by requesting an application from the Office of Admissions.

Applicants for admission must have their complete academic records (transcripts, mark sheets, degree certificates, diplomas) evaluated by a NACES approved professional credential evaluation service. The Graduate School prefers that you use one of the following professional evaluation services: Educational Credential Evaluators (ECE) or World Education Services (WES).

Educational Credential Evaluators, Inc.
P.O. Box 514070
Milwaukee, WI 53204-3470
USA
ECE telephone number: (414) 289-3400
ECE fax number: (414) 289-3411
ECE e-mail: eval@ece.org
ECE website: www.ece.org

OR
World Education Services
P.O. Box 745, Old Chelsea Station
New York, New York 10011-0745
USA
WES telephone number: (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. When we have received the evaluation, we will process your application for admission.

Students may begin the application process by providing evaluated academic records through their third year. Students will be required to provide an evaluated academic record including the fourth year and awarding of a degree/diploma as soon as possible after enrolling. If an updated evaluated record is not provided a **hold** will be placed on the student's account; pending fulfillment of requirements, the student will be unable to schedule courses.

International applicants who have English as a second language must present an official TOEFL score report sent directly to us from the Educational Testing Service (ETS). We will accept scores from the paper-based, computer-based, or Internet-based

TOEFL. We will also accept an official Intensive English Language Testing System (IELTS) score report sent directly to us from British Council et al.

All materials including admission application and fee, official TOEFL or IELTS score report, credential evaluation results, and financial information should be submitted to the Office of Admissions.

Immigration regulations require an affidavit of support and a current bank statement if the support is not furnished by an official governmental or international agency. In order to receive the I-20 document (required to apply for your F-1 student visa), you must be admitted to the degree program AND have your financial information (affidavit of 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 the required documents listed above.

Upon arrival on campus, students holding F-1 visas should report to the Director of International Programs located in the Student Life Center, McLean Hall. Bring your passport, visa, and student copy of the I-20.

Please be advised that students on the F-1 visa must be enrolled in full-time degree programs in order to maintain their immigration status. Also for F-1 students, no more than the equivalent of one graduate class or three credits per session (semester, term) may be counted if taken online OR through distance education.

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. All international students are required to carry adequate health and accident insurance.

Further questions regarding international students at Shippensburg University should be addressed to the Center for Global Education, Ceddia Union Building Room 221, 1871 Old Main Drive, Shippensburg, PA 17257-2299 USA, (717) 477-1279 or e-mail: meburnett@ship.edu.

Transfer Students

Shippensburg University may admit to its graduate program transfer students from other accredited graduate schools provided they are in good standing in those schools and satisfy all other admission requirements. A maximum of nine credit hours of graduate coursework earned at another institution may be accepted as transfer credit towards a graduate degree. The courses must be part of a graduate degree program at the sponsoring institution and must be appropriate for the student's program at Shippensburg University. In order to be evaluated for transfer credit, courses must be listed on an official graduate transcript with a final grade of B or higher. Credit earned more than five years prior to the date you begin your graduate program at Shippensburg does not qualify for transfer credit.

The academic department of the graduate degree program to which you are applying does a transfer credit evaluation. Additional documentation (such as catalog course descriptions) may be required to complete this process. Students wanting to appeal their transcript evaluation must contact the appropriate department chair for reconsideration.

Condensed one-week graduate courses for three graduate credits may qualify for transfer credit based on the following criteria: the number of contact hours follows our credit hour policy, and the student learning outcomes and their assessments are at the graduate level. Non-college educational experiences do not qualify for graduate transfer credit.

Special Admission

Graduates of accredited colleges who wish to register for up to six credit hours in special programs offered by Shippensburg University may apply for special admission. No application fee is required and an undergraduate transcript does not have to be submitted.

This category of admission is restricted to certain special programs. Students in this category who subsequently wish to be admitted to a degree program must complete a regular application and pay the application fee.

ACADEMIC POLICIES AND PROCEDURES

As a graduate student at 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, and requirements for graduation. This chapter explains the general academic policies for graduate students. The chapter on *University Curricula* (p. 39) discusses the specific requirements for individual graduate degree programs.

Applicable Policies

In general, you will be subject to the academic policies and degree requirements that are in effect during the semester in which you matriculate in a particular graduate program at Shippensburg University. You matriculate for this purpose by being admitted to a graduate degree program and then registering for and starting an academic semester. 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 2014-2015 and 2015-2016 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.

Time Definition

Many 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 (7) 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.).

Graduate Council

Within the university’s governance structure, the Graduate Council is responsible for recommending the policies that govern the operation of the graduate program. These recommendations include graduate courses and degree programs, admissions procedures and standards, graduate assistant policies, and requirements for good academic standing. Membership in the Graduate Council includes graduate faculty, college deans, the Dean of Graduate Studies, and a representative of the Graduate Student Association Board.

Department Chairs and Deans

Academic decisions concerning individual graduate students are generally made by a recommendation from the student’s department chair to the dean of the college in which the department is located. Such decisions include admission to a degree program, admission to candidacy, recommendations for independent study or individualized instruction, substitution or modification of degree requirements, extension of time for

completing a degree, and final approval for graduation. Decisions of the deans are subject to review by the Dean of Graduate Studies.

Grading and Point System

The following system of grades is used to indicate the quality of academic work for graduate students:

Regular Letter Grades

A	Excellent
A-	
B+	
B	Good
B-	
C	Fair
F	Failure

Special Grades

I	Incomplete
Q	Deferred grade
P	Passed
TR	Transfer Credit
N	Audit (no credit)
W	Withdrawal

Individual faculty members may choose to use single letter grades and not award plus/minus grades.

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	2.0 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, a grade of B (3 points) in a 3 credit course earned 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 *Repeating Graduate Courses* (p. 24) for details.

Your *semester* QPA is the average for one semester or summer term, while your *cumulative* QPA refers to the average for all courses completed during a graduate degree program. A B average would be the equivalent of a 3.0 QPA.

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.

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.

Credits you earn at another institution that are accepted toward your degree at Shippensburg are indicated with a grade of TR. See the *Transfer Credit* (p. 24) section for further details.

Credits earned with grades of P or TR will be counted toward 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 section *Withdrawal from a Class* (p. 23).

Academic Progress and Standing

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

Full-Time Status

Nine credit hours per semester is considered a full-time load for a graduate student, with 15 credit hours as the maximum for which a full-time graduate student may register per semester. Students taking less than 9 credit hours are considered part-time.

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 issues reports of progress including grades, written evaluations, and letters of warning directly to the student. You may have access to all information pertaining to your educational records and academic status. At the end of the semester, grades will be posted on the university's secure student portal.

Grade Appeals

(I) Introduction

A graduate 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 that have previously been communicated to students verbally or in writing. At the same time, students have the right to ensure 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 Final Course Grade

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

- A. The course instructor miscalculated the final course grade.
- B. The course instructor committed an oversight in calculating the final course grade.

C. The course instructor acted in an arbitrary and/or capricious manner in assigning grades to the student, including the final course grade to the student. For an instructor to act in an arbitrary, and/or capricious manner in assigning grades is defined as follows:

1. The instructor assigned a course grade to a student on some basis other than performance in the course.
2. The instructor assigned a course grade to a student by resorting to unreasonable standards different from those applied to other students in that course.
3. 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 or program shall consist of a minimum of three regular tenure track faculty members in the department or program (excluding the department chairperson or program director) and an equal number of students who are majors in the program, 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 or program 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 graduate students and one graduate alternate enrolled in the academic program to serve on the Academic Appeals Committee. Each academic department or program 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 graduate dean's office. In the event a program 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 program 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.

Note: Non-standard course terms shall have their deadline dates calibrated with the deadline for formal appeals from the semester or term in which they end.

In the event a faculty member, department chairperson, or program director (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 program 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 or program director to establish procedures consistent with this policy and past practice for entertaining the desired grade appeal.*

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

****Note: 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 or Program Director –

Within seven (7) calendar days of receiving a completed grade appeal form, the program 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 Program Grade Appeal Hearing—If the student finds the mediated effort fails to address his or her concerns or achieve the desired results, he or she must notify the department chairperson or program director in writing within fourteen (14) calendar days of the meeting with the program chairperson (or designee) of his or her desire to continue on to the formal grade appeal hearing before the Academic Appeals Committee of the program. 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 an 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 graduate 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 program 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 program is housed upon the following grounds:

- The student can demonstrate substantial procedural irregularities or inequities in the conduct of the hearing.
- 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.
- 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 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 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.

Minimum Academic Standards

As a graduate student at Shippensburg University, you are expected to maintain satisfactory academic standing, which requires a cumulative QPA of 3.0 (B) or better in your total program of courses. If your cumulative QPA drops below 3.0 or you earn one C grade in a graduate course, you will be placed on academic probation.

Students on probation must raise their QPA to 3.0 by the end of the next semester (or full summer term) in which they register. An additional probationary semester may be granted at the discretion of the college dean.

If you fail to meet the conditions of academic probation you are subject to dismissal.

Some programs may require undergraduate courses be taken while a student is enrolled in a graduate program. In this event, students must follow the standards for undergraduate courses that have been determined by the department, and the university will follow those standards for dismissal when appropriate.

In addition, some programs may require higher standards than listed above because of limitations imposed by accreditation agencies and societies. Such requirements are provided by departments administering these programs.

Dismissal for C Grades

You may earn only one C grade in any graduate course taken at Shippensburg University. This includes any courses that have been repeated and replaced with a higher grade. If you earn two C grades you will be dismissed from the university.

A C grade earned at Shippensburg University may not be made up at another institution of higher learning for the same course.

Dismissal for F Grades

If you earn an F grade in any graduate course taken at Shippensburg University, you will be dismissed from the university.

An F grade earned at Shippensburg University may not be made up at another institution of higher learning for the same course.

Notice and Appeal

If you are academically dismissed you will be notified in writing by the Registrar's Office. You may appeal your dismissal by writing a letter to your college dean (with a copy to your department chair) by the date indicated in the dismissal letter. All appeals will be considered by the Academic Review Committee.

Readmission of Dismissed Students

If you are dismissed for academic reasons, you may not apply for readmission to the university for at least one calendar year following your dismissal. Students who are dismissed may not take classes as a non-degree graduate student and may not apply for admission to a different graduate degree program at Shippensburg.

Students who have had their provisional or conditional admission terminated may not apply for readmission to the university for at least one calendar year. Applicants who have been denied admission to a degree program may take classes as a non-degree student with the permission of the academic department offering the course(s) on a course-by-course basis.

To apply for readmission, you must submit the appropriate application form to the Registrar's Office with the regular application fee. Readmission is never guaranteed following academic dismissal. It may only be granted if you present compelling evidence of some fundamental change that will allow you to perform academically at the level needed to graduate.

Earning Academic Credits

You may earn graduate academic credits at Shippensburg University in several ways: by taking normal coursework at the university, by working on internships, through independent study projects, and by taking courses at other accredited institutions for transfer back to Shippensburg University.

Registering for Classes

The normal semester hour workload for graduate students varies between 9 and 15 credit hours. Students with less than 9 credit hours are classified as part-time.

Current and newly admitted graduate students may register for classes at the university online during the registration period held each semester for the next semester.

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, library fines, and final transcripts not submitted. It is your responsibility to satisfy the obligation with the office that placed the hold before you will be allowed to schedule.

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 class availability. Payment is required at the time of rescheduling and a late fee will be charged.

Students who have not registered 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.

Dual-Level (400) Courses

Courses with numbers from 400 to 499 are open to graduate and advanced undergraduate students. Graduate students enrolled in 400-level courses are expected to meet the customary standards appropriate to graduate-level studies. These standards are reflected in the specific requirements found in syllabi for each of the 400-level courses. A maximum of 12 semester hour credits of 400-level courses may be applied to the master's degree requirements.

Undergraduate Courses

Graduate students may take undergraduate courses to make up deficiencies, fulfill prerequisites, or meet certification requirements. If you take an undergraduate course, it will be recorded on a separate undergraduate transcript along with the grade earned. The credits earned will not be counted toward the master's degree, and the grades are not used in calculating your graduate-level quality point average.

Withdrawal from a Class

Courses may be added or dropped without penalty or record notation during the official schedule adjustment period held at the beginning of the semester. Dates for this schedule adjustment period will be announced by the Registrar's Office. The drop/add period will extend to the eighth calendar day excluding holidays and when the university is closed, to provide the student with one full week plus the weekend in a typical semester to obtain any necessary approval for closed courses or pre-requisite overrides.

You may withdraw from a class through the tenth week of the semester. If you have scheduled more than one course, you may withdraw online during this period. Requests for withdrawals from your final course of the term must be initiated through the Registrar's Office. 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. If you withdraw after the beginning of the eleventh week of the semester you will receive an F grade. 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.

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 to your college dean clear medical evidence you are unable to continue your coursework. 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.

Students enrolled in the JCJC weekend program must notify the Registrar's Office they are withdrawing by the Friday following the first weekend of classes to be eligible for a refund. Withdrawals that occur after that time will not be eligible for a refund.

Independent Study

Shippensburg University affords opportunity to deserving and capable graduate 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 3.0. Your project must be agreed to by the faculty member you would like to work with and then approved by your department chair and academic dean as well as the faculty member's chair and dean. Final approval is required from the Dean of Graduate Studies and the Provost and Vice President for Academic Affairs. You must register for the independent study project in the semester for which it is approved.

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 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 the Registrar's Office. Your course must be agreed to by the faculty member you would like to work with and then approved by your department chair and college dean as well as the faculty member's chair and dean. Final approval is required from the Dean of Graduate Studies and the Provost and Vice President for Academic Affairs.

Internships

Experiential learning in the form of internships and field experiences is available to graduate students in many areas of study. You should contact your academic advisor or department chair for information regarding these academic opportunities.

To register for an internship at the graduate level, you must be enrolled in a graduate degree program at Shippensburg University and have a cumulative QPA of at least 3.0. The maximum credit for a graduate internship is six credit hours. Internship experiences are graded on a pass-fail basis only.

Internships must have the approval of your advisor, department chair, and college dean. When an internship is approved, you must schedule the appropriate number of credit hours and pay all course fees.

In programs that include clinical components, practicums, and/or internships, each student's effectiveness and suitability for the program will be given a broad-based evaluation by faculty and/or supervisors. Final decisions regarding continuance of studies will be predicated on a combination of factors such as demonstrated clinical competence, personality factors, and other relevant issues in addition to course grades.

Repeating Graduate Courses

Students may repeat any course taken previously, regardless of letter grade. Permission from the academic department must be obtained before a course may be repeated. Graduate students are limited to a total of two repeats where the most recent grade of the course will be used in the QPA calculation, regardless of whether that grade is higher or lower. A single course repeat for grade improvement is limited to one time.

If you repeat a course, only the most recent grade will be used in calculating your cumulative QPA. If you repeat a passed course and fail, you will lose both the quality points and the credits you had previously earned. After the second repeat instance, any additional course repeats will include both the previous and new grade in the QPA calculation.

A C or F grade earned at Shippensburg University may not be made up at another institution of higher learning for the same course. Independent study or individualized instruction may not be used to repeat a course.

Transfer Credit

In order to meet the needs of individual students who are not transfer students, specialized work at other institutions may be recommended to a maximum of nine credit hours. If you are admitted to Shippensburg's graduate program and wish to take graduate courses elsewhere for transfer credit after starting your program, you must receive prior approval from your advisor and from the Dean of Graduate Studies in order to insure transfer credit can be granted. A maximum of nine semester hour credits of graduate work earned at another institution will be accepted provided the courses are appropriate for your program at Shippensburg University, and the credits are received on an official transcript with grades of B or higher. Credits transferred to a Shippensburg University master's degree program from other institutions must not have been applied to a previously earned bachelor's degree.

Grades earned in courses transferred from other colleges and universities are not included in determining your quality point average in the graduate program at Shippensburg.

Credit earned more than five years prior to the date you begin your graduate program at Shippensburg University does not qualify for transfer credit.

Graduation Requirements

As a fulfillment of its obligation to higher education, Shippensburg University has established high standards of achievement and promise for its students that must be met without question before graduation is approved by the faculty or

the administration of the university. Specific requirements relating to individual master's degree programs may be found in the chapter *University Curricula* (p. 39).

General requirements for the master's degree include a cumulative QPA of 3.0, the completion of all coursework, the completion of any comprehensive requirement (including thesis), and the resolution of all outstanding judicial and/or academic dishonesty matters. Additional graduation requirements may also be required by academic departments.

Applications for graduation must be submitted to the Registrar's Office by the end of the second week of your final term.

Commencement ceremonies are generally held on Friday evening at the end of final examination week. A graduate of the university is expected to participate in the commencement ceremonies at the end of the semester in which they complete all requirements for graduation. Students who meet those requirements in August have the option to participate in either the preceding spring commencement ceremony or the following winter commencement ceremony. Students who, at the completion of either the fall or spring semester, are within six (6) 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.

Time Limit

All coursework and research for the master's degree must be completed within a seven-year period beginning the semester you matriculate in the degree program. Extensions must be requested through your department chair and approved by your college dean and the Dean of Graduate Studies. The request is to contain an analysis of the previous coursework and how it applies to the current program taking into account if the content of the course has changed significantly and needs to be made up, a list of the coursework yet to be completed, and a deadline for the completion of the degree. If completion of the program includes a project or thesis, milestones with dates for reaching them should be included.

This policy does not apply to students who have been dismissed from their program and have been re-admitted after separation from the university. The policy regarding transfer credits applies in these circumstances.

Advisement

When you are admitted to graduate study, the chair of your major department (or a designated representative) will assign you a program advisor. It is your responsibility to arrange an appointment with the program advisor as soon as possible to outline your program, taking into consideration previous work and your individual objectives. You should follow the curriculum as outlined for your field of specialization unless an adjustment is approved on the basis of previous work or experience. Although the program advisor will assist you in planning your program, you are responsible for knowing the curriculum requirements and seeing these requirements are met.

Admission to Candidacy

Some academic departments require you to apply for and be admitted to candidacy in order to complete the program of study leading to the master's degree. The candidacy process is used to review your progress and compliance with academic policies.

Departments requiring candidacy may establish their own guidelines. Contact your department for further information.

Research Requirement

All master's degree programs must require an appropriate research and/or statistics course.

Comprehensive Requirement

The completion of a master's degree must have an evaluation or a culminating experience to be determined by each academic discipline. This requirement could be in the nature of a comprehensive written examination, an oral examination, an interview, proof of competencies being met in a program, or other similar evaluation activity that demonstrates mastery of subject area.

Double Counting

The concept of "double counting" credits for two different master's degrees is not encouraged. In certain cases, however, an academic department may recommend a maximum of nine credits earned in one master's degree at Shippensburg be transferred to a second master's degree at Shippensburg University.

Dual Graduate Degrees

For graduate students completing dual graduate degrees simultaneously, no more than 9 credits can be transferred in from another institution or double counted from another Shippensburg University graduate program.

Thesis

Before registering for thesis you should confer with the department chair concerning the appointment of your research advisor and the other members of your thesis committee. The names of the advisor and committee members must be submitted to the Registrar's Office for approval at the time you register for the thesis. Registration for the thesis may be completed at the beginning of any semester or summer session. In planning work on your thesis, you should take into consideration faculty members are not always on campus during the summer sessions.

You may register for Thesis I and Thesis II concurrently or in different semesters. A temporary grade of Q will be recorded for a thesis when the work is not completed at the end of the semester. Only when the thesis is completed can a regular letter grade be recorded. Under no conditions may a regular letter grade be submitted unless the thesis is completed and signed by all thesis committee members.

You must submit the thesis to the Registrar's Office in final approved form within one calendar year from the date you register for Thesis II. Otherwise, you must register again for Thesis II and pay the appropriate course fees. If you do not complete the thesis within the required time and do not re-register for Thesis II, grades of F will be recorded for both Thesis I and Thesis II.

When registering for thesis credit, you must submit the Arrangements for Completing the Thesis Requirement for the Master's Degree form. For additional information, contact the Registrar's Office.

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 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 that 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, 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 that 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 records 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 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 *Swatoney* 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, which 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 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 be attached to any sanction.

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 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 acknowledgement 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.

STUDENT MATTERS

This chapter concerns some of the non-academic areas of graduate student life at Shippensburg University, including fees, student services, and financial assistance.

Tuition and Fees

Fees and due dates are subject to change.

Summary of Costs

The following are per credit costs for a graduate student who is a Pennsylvania resident (2014-15 costs).

Graduate Tuition	\$454
Technology Tuition Fee	\$24
Student Union Fee	\$24
Educational Services Fee	\$71
Comprehensive Health Fee	\$14
Total	\$587

Payment of Fees

Fees are payable in advance as indicated below. Payment by check, cash, or money order may be made directly to the Student Accounts Office. Unless otherwise indicated, all checks shall be made payable to Shippensburg University. Payments by electronic check and credit card (Master Card, VISA, Discover, American Express) may also be made online through the Student Information System at <https://my.ship.edu>. Credit card payments are subject to a 2.5 percent convenience fee. There is no charge for payment by e-check.

Do not send cash by mail.

Semester	Payments Due
First	Early August
Second	Mid-December

The above dates are subject to change.

Delinquent Accounts

If your account is not paid in full, you will not be permitted to enroll for classes, graduate, or receive a diploma or transcript. Accounts delinquent for 90 days are turned over to the Pennsylvania Attorney General for collection.

Pennsylvania Resident Tuition

Graduate students who are residents of Pennsylvania pay a tuition fee of \$454 per credit, whether they are taking graduate or undergraduate courses.

Out-of-State Student Tuition

Graduate students whose legal residence is not in the state of Pennsylvania pay a tuition fee of \$681 per credit, whether they are taking graduate or undergraduate courses. Out-of-state graduate students taking online courses pay a fee of \$463 per credit hour.

NOTE: The above fees are valid only through the summer of 2015.

Fees

Semester Fees

All fees are subject to change without notice.

Educational Services Fee

This fee provides instructional and library supplies and equipment. It is charged to all students in all semesters and sessions in accordance with the following schedule:

	Regular Semesters	Summer Sessions
Graduate per credit	\$71	\$71

This fee is refundable according to the schedule in the section *Refunds* (p. 31).

Technology Tuition Fee

This fee is established by the Board of Governors of the State System of Higher Education. The purposes of the technology tuition fee are: (1) to acquire, install, and maintain up-to-date and emerging technologies for the purpose of enhancing student-learning outcomes; (2) to provide equitable access to technology resources; and (3) to ensure that State System graduates are competitive in the technologically sophisticated workplace.

The technology tuition fee is not a user fee, but is instead a fee that is paid by all students according to their residency status (in state/out-of-state). Currently (2014-15), the technology tuition fee for graduate students is \$24 per credit in state and \$36 per credit out-of-state.

The technology tuition fee is non-refundable.

Student Union Fee

State law and policies of the Board of Governors of the Pennsylvania State System of Higher Education require the cost of constructing the original Ceddia Union Building and its addition 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:

	Regular Semesters	Summer Sessions
Graduate per credit	\$24	\$18

Students taking online courses do not pay this fee.

The Student Union Fee is refundable based on the schedule in the section *Refunds* (p. 31).

Comprehensive Health Fee

All graduate students must pay a Comprehensive Health Fee of \$14 per credit. During the summer sessions, the graduate comprehensive health fee is \$11 per credit hour. Students taking online courses do not pay this fee.

Activities Fee

The Activities Fee is required of all graduate students attending summer sessions. The fee covers the cost of supporting student organizations in athletics, lectures, entertainment, and publications. This fee is \$16 per credit hour. Students taking online courses do not pay this fee.

Special Fees

All fees are subject to change without notice.

Application Fee

A fee of \$45 is charged when you first apply for graduate study at Shippensburg University. The application fee is not refundable and is not credited toward course fees. A fee of \$15 is charged for non-degree applicants.

If you do not begin your graduate study within one year of being admitted, you will need to pay an additional fee to apply again.

Late Payment Fee

If you submit your semester bill payment after the bill due date, you will be subject to a late payment fee of \$100. All semester bills must be paid or cleared on line prior to the bill due date to avoid the late fee.

Graduation Fee

A fee of \$50 must be paid at the time you apply for graduation. This fee covers the cost of processing your application and preparing your diploma.

Miller Analogies Test Fee

A fee of \$75 is required of all persons who take the Miller Analogies Test.

Parking Fee

All vehicles operated by faculty, staff, and students (graduate or undergraduate) are required to be registered with the University Police and to display a current parking decal on the right rear bumper. Student parking decals (through 2014-2015 academic year):

\$75 for the academic year
\$15 summer only (May through August)
\$10 for additional vehicles

Bad Check Fee

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

Room and Board

Campus housing for graduate students during the regular semester is based on availability of space. A meal plan is available for commuting students. Housing is available during the summer terms.

Meal Plans

During the regular semester, meal plans are available that provide a certain number of meals per week in the dining halls. For details, please visit <http://www.dineoncampus.com/ship/>. All of the meal plans include \$250 initial flex. Meal plans may also be purchased with \$375 initial flex. Additional flex may be purchased in \$25 increments.

The flex-only meal plan is perfect for the student looking to eat the occasional meal on campus and begins at \$100 per semester. With this plan you receive flex dollars that you can spend at any dining location on campus. You can add additional flex dollars to your account at any time.

Meal plans are also available during the summer sessions. Meal plan rates are subject to change.

Summer Sessions Room and Board

Information about graduate student housing for the summer sessions can be obtained by contacting the Dean of Students Office at (717) 477-1164. For details, please visit <https://www.ship.edu/housing/>.

Refunds

A graduate student is considered to be in class attendance up to the date on which a written notice of intent to withdraw is received in the Registrar's Office. This date becomes the official date of withdrawal when calculating adjustments of tuition and fees and the return of federal financial aid.

During the academic year the following schedule determines the amount of refund or reduction in tuition and fees to be granted in the event of withdrawal:

Through the drop period	100%
End of drop period through 2nd week	80%
3rd week	60%
4th week	50%
5th week	40%
Over 5 weeks	0%

There is no refund or reduction of charges for individual courses withdrawn after the end of the drop period. Refunds are only issued for full semester withdrawals. Students enrolled in late starting courses may be subject to an alternate refund schedule. Details may be obtained at www.ship.edu/Student_Accounts/ under Refund Schedule.

The most current summer session refund dates may be found at www.ship.edu/Student_Accounts/ under Summer Tuition.

The refund schedules assume the student account is paid in full and the percentages are not being applied to a partial payment of tuition. The application fee, technology fee, and advance deposits are non-refundable.

If a student is a recipient of federal Title IV financial aid, the amount of federal aid that the student earned up to the date of withdrawal is calculated using a specific formula. If the student received less aid than the amount earned, the student may receive those funds as a post-withdrawal disbursement. If the student received more aid than the amount earned, the excess funds must be returned by the school and/or the student. Refunds to those programs are required by federal law to be the first priority and must be returned in the following order:

1. Federal Unsubsidized Stafford loan
2. Federal Subsidized Stafford loan
3. Federal Perkins loan
4. Federal Parent PLUS loan
5. Federal Pell Grant
6. ACG Grant
7. SMART Grant
8. Federal SEOG
9. TEACH Grant

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

More information concerning the detailed application of the refund policy can be obtained by visiting the Student Accounts link in the Student Life section of the Shippensburg University website, www.ship.edu.

Refund policies are subject to change by the Pennsylvania State System of Higher Education.

Financial Assistance

Shippensburg University provides financial assistance to graduate students through graduate assistantships, student payroll positions, student life graduate assistantships, graduate residence director appointments, and student loans.

Graduate Assistantships

Graduate assistant appointments provide opportunities to participate in professionally related activities with faculty and administrators. These assignments can extend learning experiences beyond the classroom and enhance professional development.

Graduate assistant appointments are awarded on a competitive basis. They provide a tuition waiver as well as compensation for work performed.

Eligibility and Academic Load

To be eligible to receive a graduate assistant appointment, a student must be admitted into their first master's degree program. Non-degree students, those working towards certification without a degree, or those working on a graduate letter of completion or graduate certificate, are not eligible. Provisionally admitted students are not permitted to work as graduate assistants during the provisional semester(s).

Graduate assistants must maintain at least a 3.0 cumulative QPA and must not have earned more than two grades of C or less in any course taken while a graduate student.

The tuition waiver applies to courses necessary for graduation. Therefore, in most cases, students may not hold graduate assistant positions for more than two years, defined for this purpose as four regular semesters and one summer session. Students in degree programs that require more than 36 credits may hold positions for more than two years.

Students may not be appointed as graduate assistants while working toward their second Shippensburg University master's degree.

Exceptions to these eligibility requirements may only be made upon written recommendation of the student's Graduate Coordinator, and approved by the Dean of Graduate Studies.

During the academic year, full-time graduate assistants usually enroll in nine graduate credits each semester. Starting with the fall 2014 semester, graduate students may be instructed by their Graduate Coordinators to take only six credits for a semester or two during their program, putting students in temporary part-time Graduate Assistant (GA) status so that only those courses required to graduate are covered by the tuition waiver. GA's who want to request part-time GA status should make the request of their Graduate Coordinator. If the Graduate Coordinator approves, he/she will then send an e-mail message to studentemployment@ship.edu and to the student's GA supervisor.

GA appointment letters will note that part-time GA's are required to work fewer hours but may work up to the full-time allocation of 250 hours. The GA will be required to note on the agreement form his/her intentions regarding the total number of hours to be worked. For those cases when the graduate student requests to enroll in less than 9 (nine) credits, as opposed to the Graduate Coordinator making the request, the Graduate Dean will consider those requests upon recommendation of the Graduate Coordinator due to extraordinary circumstances. Students approved for these temporary part-time statuses may be able to extend their GA position beyond two years upon request. During the summer sessions, all graduate assistants must register for and complete one graduate course (3 or 4 credits) during one of the summer sessions.

When the student's academic program requires him/her to enroll in more than 9 credits, the student may request an increase in the tuition waiver. The Graduate Dean considers these requests on a case-by-case basis after review of the student's program of study and, if necessary, in consultation with the Graduate Coordinator. The Graduate Dean also considers, on a case-by-case basis, providing tuition waivers for courses that are not necessary for graduation but cover additional professional skills that add value to the master's degree.

Application Procedures

Apply online at www.ship.edu/Graduate/Assistantships/.

Applications will be accepted as soon as positions are posted online. Appointments may be made through the end of the sixth week of the semester as long as there is a position vacant (see also *Late Appointments*).

Appointment Process

Available graduate assistantships and student payroll positions (SPPs) administered by the Graduate Dean are posted online. We recommend applicants contact supervisors directly to request interviews. Academic departments can also help to identify potential positions.

Supervisors who hire students for graduate assistantships and student payroll positions will review the applications that have been forwarded to them and consult with academic departments to identify candidates. They may conduct interviews before making a final decision. Typically, the supervisor will make a verbal offer and ask for acceptance before making the formal recommendation for appointment.

After the hire recommendation is submitted online by the supervisor, the Office of the Graduate Dean will verify the student's eligibility and then send an official letter of appointment to the student's Shippensburg University e-mail account. Students are then required to sign a memorandum of understanding and return it to the Office of the Graduate Dean. Also, new student workers will need to complete appropriate payroll forms in the Human Resources Office.

Tuition Waiver

When an appointment is formally made, the Student Accounts Office will be notified and instructed to process a tuition waiver for 9 graduate credits (in most cases) or a refund if tuition has been paid. Graduate assistants are responsible for all tuition above 9 graduate credits and fees (including late registration, health services, educational services, student union, and graduation).

Summer assistants are eligible for a tuition waiver covering one graduate course (3 or 4 graduate credits); students are responsible for all other tuition and fees.

Exceptions to cover more than 9 graduate credits are considered on a case-by-case basis usually in situations when additional credits are required by the student's program of study.

Students having student payroll positions are not eligible for tuition waivers.

Work and Compensation

Graduate assistants are compensated for the work they do on an hourly basis. The hourly scale is determined by the Vice President for Administration and Finance.

During each semester, full-time graduate assistants are required to work 250 hours (approximately 15 hours per week). During the summer, graduate assistants are required to work 150 hours, and part-time status is not available. Students having student payroll positions are required to work the same number of hours. GAs approved for part-time GA status will be required to work the number of hours shown below:

Number of credits scheduled	Required number of hours
8	222
7	194
6	167

Graduate assistants must work at least 90 percent of the required hours in order to qualify for the tuition waiver. Assistants working less than this amount will be required to pay for a portion of tuition on the following schedule:

Hours worked	Repayment required
80 - 89 %	10 % of tuition
70 - 79 %	20 % of tuition
60 - 69 %	30 % of tuition
50 - 59 %	40 % of tuition
50 or less %	50 % of tuition

Benefits

With the exception of the tuition waiver and compensation for work performed (including social security and workmen's compensation payments), students in graduate assistantships and student payroll positions do NOT receive any of the benefits provided to regular university employees. They do not receive health benefits, sick leave, or any paid holidays or vacations. They are not eligible for STAFF parking stickers for their vehicles.

Late Appointments

Graduate assistants may be appointed through the end of the sixth week of a semester. Up to the end of the first week of classes, students will receive the full tuition waiver as long as they work the required number of hours.

After the first week of classes, the tuition waiver will be prorated based on the following schedule: through the end of the second week, 90 percent; third week, 80 percent; fourth week, 70 percent; fifth week, 60 percent; sixth week, 50 percent.

Students accepting a late appointment may work the full number of hours. The number of hours required (see *Work and Compensation* (p. 33) section above), however, will be based on the percentage of tuition received times the full number of hours. For example, a student who accepts a position during the third

week of the semester will be required to work 200 hours, or 80 percent times 250 hours.

Students accepting an assistantship after the drop/add period must be registered for the appropriate number of credit hours (see *Academic Load* (p. 32) section).

Changing Appointment

If an assistant would like to resign from an assistant position mid-semester in order to accept a different one, the first department must give written consent. If the department chooses not to give this permission, the student may not accept the other appointment. Assistants may not circumvent this requirement by resigning from one position and then accepting another appointment.

To give permission to change positions, the department that made the original appointment should send written authorization to the Office of the Graduate Dean.

Resignation, Dismissal, or Academic Probation

A graduate assistant may resign from a GA position during the course of a semester. Any hours worked prior to resignation must be recorded on the student payroll and paid to the student.

A student who resigns will have tuition waiver prorated based on the number of hours actually worked. For example, if a graduate assistant works 50 hours and then resigns, only 20 percent (50/250) of the tuition will be waived. The student will then be billed for the remaining 80 percent.

A student who withdraws from classes and no longer meets the academic load requirements will be dismissed from the assistantship. Compensation and tuition waiver policies are the same as those for a resignation.

At the discretion of the GA supervisor, a graduate assistant may be dismissed from a position. The GA supervisor must notify his/her supervisors (for example, the Department Chair, the Academic Dean, Vice President for Student Affairs) and the Dean of Graduate Studies in writing of the decision and the reasons for it. Compensation and tuition waiver policies are the same as those for a resignation.

It may be possible for a student to continue in a GA position while on academic probation after consulting with the student's Graduate Coordinator. A coordinator could decide not to support the continuation if it is felt that the competencies, skills, and requirements of the GA position cannot be met by a student on probation.

When students are unable to resolve issues related to their SPP/GA positions by talking with their supervisors, students are encouraged to contact the supervisor's supervisor. This could be the Department Chair, the Dean, or another individual. The Graduate Dean's Office can provide this information upon request.

Student Payroll Positions

Student Payroll Positions (SPPs) are administered through the Graduate Dean's Office. Students working in SPPs earn hourly wages at the current minimum wage rate but are not eligible for tuition waivers. Priority for hiring is given to graduate students, but unfilled positions will be available to undergraduate students near the beginning of the semester. All SPPs are posted online on the Graduate Assistant page and are identified in job titles as

“SPP.” Appointments are awarded each semester on a competitive basis and without regard to financial need.

Students may be employed in two SPPs at the same time, or they may be employed in one GA position and one SPP at the same time. However, a student may not hold two GA positions at the same time.

Students must be in good academic standing by maintaining a QPA of at least 2.0. Graduate students must be enrolled, full time or part time for the academic year. Undergraduate students must be enrolled full time for the academic year. Summer enrollment is not necessary. Students must be enrolled during the previous spring or scheduled for the upcoming fall.

Residence Directors

Residence Directors supervise the eight residence halls or apartments for students living in campus housing. General responsibilities include supervising undergraduate staff members, responding to student needs and issues, serving as an emergency on-call person, working with camps and conferences, advising student groups, assisting in hall maintenance processes, implementing programs and services, and participating in the adjudication of conduct code violations. Residence Directors also perform a variety of tasks within the Office of the Dean of Students.

Residence Directors must be enrolled in a graduate program during their period of employment. Hiring preference is given to individuals enrolled in the counseling program, with special consideration given to those with a student personnel emphasis. Previous experience working within a residence hall or some other related aspect of student personnel work is preferred. Strong interpersonal skills, plus an interest in and an understanding of working with undergraduate students are required.

The Residence Director position is a twelve-month appointment. In addition to a salary (contact the Office of the Dean of Students for specifics), Residence Directors receive a free apartment and meal plan. Additionally, Residence Directors receive a tuition waiver for six credits per semester and three credits per summer. In order to balance academic and professional success, Residence Directors are not authorized to exceed the aforementioned credit limits, thus limiting them to a maximum of 15 graduate credits per year.

Applications and additional information may be obtained by contacting the Office of the Dean of Students.

Loans

Federal Direct Stafford Loans are available to matriculated graduate students who are taking at least 6 credits per semester. In order to qualify, a student must complete the Free Application for Federal Student Aid (FAFSA) and a Federal Direct Stafford Loan application.

There are two types of Stafford Loans: subsidized and unsubsidized. The subsidized loan is interest-free while the student is in school. The student is charged interest on the unsubsidized loan while in school, and may opt to pay it as it accrues, or allow it to accrue and capitalize. Eligibility for the interest subsidy and the amount of the loan will depend upon the student's financial need (as determined by the results of the FAFSA) and other resources available to the student.

Graduate students are billed for tuition and fees at the time of registration. If the student has applied for a Federal Direct Stafford Loan to cover those charges, payment may be deferred until the loan funds arrive. The student should indicate on the tuition bill that a loan is pending, and return it to the Student Accounts Office.

Students interested in additional financial aid information should visit the Financial Aid website.

Academic Progress Requirements for Graduate Student Federal Aid

Federal regulations require graduate students make satisfactory academic progress toward the completion of a degree in order to maintain their eligibility for the following programs: Federal Stafford Loan, Federal Work Study, and Federal Perkins Loan.

At Shippensburg University, in order to make satisfactory academic progress for federal financial aid purposes, a full-time graduate student must complete 18 new credits per year and maintain a 3.0 cumulative QPA. A part-time student must meet identical minimum QPA requirements and must complete 80 percent of all attempted credits each year.

Students will be notified at the close of each spring semester if financial aid eligibility is terminated due to unsatisfactory academic progress. The student may resolve the situation by taking summer courses (without federal aid), or if extenuating circumstances exist, file an appeal to have eligibility for federal funding reinstated.

Veterans Benefits

The university is approved for training veterans under the Montgomery G.I. Bill as administered by the Veterans Administration. For further information, contact the Veterans Services Office or go to www.ship.edu/veterans.

Housing

Campus housing for graduate students is provided on the availability of space. Graduate students interested in living on campus should contact the Housing Office at (717) 477-1701.

Student Services

Office of the Graduate Dean

The Office of the Graduate Dean, located in Old Main 310, provides a number of services to graduate students including coordination of graduate assistantships. Office hours are 8:00 a.m. to 4:30 p.m. Monday through Friday during the academic year. To contact the office call (717) 477-1148.

Graduate Student Association Board

The Graduate Student Association Board was organized to promote harmonious relationships among graduate students, faculty, and administration; to provide a means of expressing to the university as a whole the needs of graduate students; and to insure the rights, privileges, and responsibilities of graduate students.

Membership is automatic during the semester or session in which a graduate student is enrolled. Elections for officers are held in April with officers serving from June through May. For more information, contact the Office of Graduate Admissions.

Registrar's Office/Transcripts

You may request copies of your Shippensburg University transcripts in writing. Only three transcripts may be ordered per request. A limit of three transcripts will be mailed to the same address. The Registrar's Office reserves the right to impose a handling fee for large-volume requests. Please make your request for transcripts in one of the following ways:

1. Mail a letter or transcript request form to the Registrar's Office requesting your transcript be prepared for pick-up or sent to a specified address. The transcript request form is available at www.ship.edu/Registrar/Requesting_Transcripts/

Include the following information:

- full name and student identification number—include all previous last names, if any
 - dates of attendance
 - graduation date and degree received
 - specify graduate, undergraduate, and/or non-degree courses taken
 - number of transcripts requested
 - complete mailing address transcript is to be sent (A transcript sent to yourself may be considered unofficial. Faxed transcripts are also considered unofficial.)
 - requestor's daytime telephone number and mailing address
 - your signature is required on the request (e-mail requests are unacceptable for this reason)
 - mail request to:
Registrar's Office
Shippensburg University
1871 Old Main Drive
Shippensburg, PA 17257
2. Fax a written request to (717) 477-1388 that includes all the information specified above. The request must be signed by the student.
 3. Visit the Registrar's Office and complete a transcript request form.

To pick up a transcript, you must show valid photo identification.

Generally allow one week for processing transcript requests. Due to heavy volume of requests at the beginning and end of semesters, the processing time may be longer.

An unofficial transcript is sent to the student automatically following graduation. This transcript is sent after grades are verified and degrees posted.

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

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 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/ for more information.

Child Care

The university offers child care 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: 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.

Career Center

The Career Center, located in the Ceddia Union Building, is a comprehensive service center designed to meet the career planning, career exploration, job hunting, and post-graduation needs of every SU student. The center provides resources in exploring career options, organizing job search strategies, preparing resumes and cover letters, and developing interview skills.

In addition, the Career Center provides students with career and employer information through its bi-weekly newsletter *Ship Career Connection*, which lists on-campus interviews with employers and graduate schools, internships, and career events. The center maintains reference files that are disseminated to prospective employers or graduate schools upon request and a resource library.

Keeping with its commitment to meet students' schedules and needs, the Career Center conducts daily walk-in hours, workshops on job search and interviews, mock interviews, outreach programs for classes and organizations, appointments, and holds evening hours. Give the Career Center a call at (717) 477-1484 or stop by the office in Suite 108 for more information. Visit our website at www.ship.edu/career.

Computing and Network Services

The Computing Technologies Center (CTC) provides computing and network services for instruction, research, and administration. Students may access university e-mail (<https://mail.ship.edu>), file space (<https://stufiles.ship.edu>), and academic records (<https://my.ship.edu>). Students may also create their own personal website (<http://students.ship.edu>).

Computer Labs

The university maintains five general-purpose computer laboratories as well as dozens of departmental labs and computer classrooms. All campus labs have the complete Microsoft Office suite, SPSS, 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.

Help Desk Services

Shippensburg University Technical Support 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).

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 Development, Media, 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 Desire2Learn Learning Management System.
- Technology support in presentation software including video, audio, and image editing.
- 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 and Multi-Media Services at www.ship.edu/media. For more information or assistance with an information or media-related need, call:

Lehman Library Circulation Desk	(717) 477-1465
Lehman Library Reference Desk	(717) 477-1474
Luhrs Library (Juvenile Collection)	(717) 477-1003
Instructional Design and Development Services	(717) 477-1816
Media Services	(717) 477-1646
Broadcast Services	(717) 477-1759

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 www.ship.edu/learning/ 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 individual 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 online writing workshops, learn about interactive workshops available at the center, and access writing resources to help them throughout the writing process. Drop-in tutoring is available one day a week and students are also encouraged to stop by the Learning Center to see if a writing tutor is available on a walk-in basis. 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/.

Multicultural Student Center

The Office of Multicultural Student Affairs (MSA) is a student-centered office located in the Multicultural Student Center in Gilbert Hall. The office assists groups such as the African American Organization, Multicultural Affairs APB, Latino

Student Organization, Cultural Difference Committee, Asian American Organization, and others with program development and implementation. It also serves as a focal point and a resource for students, faculty, and others. MSA serves as a liaison with areas such as financial aid, residence life, career development, as well as the community. The office strives to expose students to individuals and experiences that will enhance their awareness of self and culture. The MSA works to improve the quality of life for all students enrolled at the university. The MSA slogan is, "We are in the business of bridge building—not bridges of steel between riverbanks, but bridges of understanding between people."

Cora I. Grove Spiritual Center

The Campus Ministry Offices are located in the Cora I. Grove Spiritual Center (Catholic Campus Ministry, room 215, (717) 477-1244; and United Campus Ministry, 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, 7:45 a.m. to 7:00 p.m.; Friday, 7:45 a.m. to 4:30 p.m.; and 10:00 a.m. to 3:00 p.m. on Saturday during the school year. For additional information, call (717) 477-1600 or visit our website bookstore.ship.edu.

Veterans Services

The Veterans Service Office provides support for students who are veterans or recipients of veterans benefits. The office coordinates veterans 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 (CUB235), 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, to go <https://www.ship.edu/veterans>.

Women's Center

The Women's Center at Shippensburg University seeks to promote equity by addressing issues of stereotyping, self-defense, women's health, domestic violence, and sexual assault. The Women's Center serves the campus community by hosting programs, conferences, workshops and other events that bring attention to women's issues. We work as advocates for students, faculty, and staff who have been affected by sexual harassment, dating violence, and sexual assault. 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.

Other Information

Commencement

Two commencements are held each year, one in December and one in May.

Students completing degree requirements during the summer or the fall may participate in the December commencement. Students completing degree requirements in the spring may participate in the May commencement. Students planning to graduate in the summer may also attend May commencement.

Graduate degree candidates must submit their application for graduation and pay the graduation fee to the Registrar's Office by the end of the second week of their final term. Applications received after the deadline date will be held and processed for the next commencement.

Fee Waiver for Senior Citizens

Tuition charges may be waived for senior citizens enrolled in any graduate program providing space is available within the desired courses. Applications for this waiver should be initiated through the Registrar's Office prior to registration for the courses to which it will apply. Application for and approval of the waiver must occur prior to registration for the courses 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 that the requesting student meets the above eligibility criteria will be required.

Pennsylvania Residency

Students applying for graduate study at Shippensburg University will be classified as resident or nonresident for fee purposes by the Office of Graduate Admissions. This classification is based on information furnished by the applicant and all other relevant information. The Office of Graduate Admissions may require written documents, affidavits, verifications, or other evidence necessary to establish the domicile of a student.

Domicile is defined by the regulations of the State System of Higher Education as the place where one intends to reside either permanently or indefinitely and does, in fact, so reside. It is the student's responsibility to present clear and convincing evidence to establish residency for fee purposes.

Evidence

The following factors may be considered as evidence of domiciliary intention: lease or purchase of a permanent, independent residence within Pennsylvania; payment of appropriate state and local taxes; agreement for permanent, full-time employment within the state; registration of a motor vehicle in Pennsylvania; registration to vote in Pennsylvania; possession of a valid Pennsylvania driver's license; and a sworn statement declaring your intention to make Pennsylvania your residence either permanently or for an indefinite period of time.

Each case is decided on the basis of all the facts submitted, with qualitative rather than quantitative emphasis. No given number of factors is required for domicile, since the determination in each case is one of the subjective intention of the student to reside permanently or indefinitely in Pennsylvania.

Determination of Domicile

Continuous residence in Pennsylvania for a period of twelve months prior to registration creates a presumption of domicile. You are presumed not to be a domiciliary if you have resided for a shorter period, but you may rebut this presumption by clear and convincing evidence.

Students who are not United States citizens, and have nonimmigrant visas or lack a visa, are presumed not to be domiciled in Pennsylvania, but they may rebut this presumption by clear and convincing evidence.

A U.S. government employee or a member of the armed forces who was domiciled in Pennsylvania immediately preceding entry into government service and who has continuously maintained Pennsylvania as his or her declared legal residence, shall be presumed to have a Pennsylvania domicile. Nonresidents stationed in Pennsylvania for military service shall be deemed Pennsylvania domiciliaries.

Procedures for Reclassification

Domicile requests for students who have earned credits at Shippensburg University should be submitted to the Vice President of Student Affairs Office. Documentation must be submitted a minimum of two weeks prior to the deadline of tuition and fee payment to be considered for the upcoming semester. Domicile requests for new incoming and transfer students should be submitted to the Office of Admissions for review.

If your petition is denied, you will be notified in writing. You may appeal this decision to the Office of the Chancellor of the State System of Higher Education. This written appeal must reach the Office of the Chancellor within thirty days of the date the university's decision was mailed.

Change of Domicile

If you change your domicile from Pennsylvania to another state, you must promptly notify the Registrar's Office. You may also be reclassified as a nonresident if the university believes you are no longer a Pennsylvania domiciliary.

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. 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.

UNIVERSITY CURRICULA

Graduate curricula of the university lead to the master's degree or to post-master's certification in school administration.

Graduate Degrees

Shippensburg University provides graduate curricula leading to five degrees:

- Master of Arts (M.A.)
- Master of Arts in Teaching (M.A.T.)
- Master of Business Administration (M.B.A.)
- Master of Education (M.Ed)
- Master of Public Administration (M.P.A.)
- Master of Science (M.S.)
- Master of Social Work (M.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. The M.S.W. is offered jointly with Millersville University.

Departments and Degree Programs

The following table lists the departments in each college and the graduate degree programs available for each department. Concentrations for each program are italicized.

College of Arts and Sciences

Biology Department

Biology M.S.

Computer Science and Engineering Department

Computer Science M.S.

IT Leadership

Software Engineering

Communication/Journalism Department

Communication Studies M.S.

Digital Media

Strategic Public Relations

Geography/Earth Science Department

Geoenvironmental Studies M.S.

History and Philosophy Department

Applied History M.A.

Political Science Department

Public Administration M.P.A.

Psychology Department

Psychological Science M.S.

Sociology and Anthropology Department

Organizational Development and Leadership M.S.

Business

Communications

Environmental Management

Higher Education Structure and Policy

Historical Administration

Individual and Organizational Development

Management Information Systems

Public Organizations

Social Structures and Organization

John L. Grove College of Business

Business Administration M.B.A.

Management Information Systems

Supply Chain Management

College of Education and Human Services

Counseling and College Student Personnel Department

Counseling M.S.

College Counseling

College Student Personnel

Clinical Mental Health Counseling

Counseling M.Ed.

Dual (K-12) School Counseling

Criminal Justice Department

Administration of Justice M.S.

Educational Leadership and Special Education Department

School Administration M.Ed.

Special Education M.Ed.

Behavioral Disorders

Comprehensive Certification

Learning Disabilities

Mental Retardation/Developmental Disabilities

Social Work and Gerontology Department

Social Work M.S.W.

Teacher Education Department

Curriculum and Instruction M.Ed.

Biology

Early Childhood Education

Elementary Education

English

Geography/Earth Science

History

Mathematics

Middle Level Education

Modern Languages

Reading M.Ed.

Science Education M.A.T.

Master of Education Degree

Teacher education programs at Shippensburg University are designed to prepare competent professionals for classroom teaching and for leadership positions in a variety of educational settings and institutions. The teacher as a “reflective co-learner” is the focus of the university’s education programs.

Shippensburg University’s teacher education programs are accredited by the National Council for Accreditation of Teacher Education (NCATE), with conditions, and by the Pennsylvania Department of Education (PDE).

The following applies to all programs leading to the Master of Education degree.

General Guidelines

1. Each candidate’s program leading to the Master of Education degree must include at least 9 semester hour credits of graduate work in professional education.
2. Each candidate’s program for the Master of Education degree must include at least 9 semester hour credits of graduate work in the content area of the candidate’s teaching field.
3. The department of the candidate’s teaching field may not specify more than 18 semester hour credits of required courses in the Master of Education degree program. Of these 18 credits that may be specified, not more than 15 credits may be required in professional studies. The department, however, may require up to 18 credits in the content field.
4. Each candidate for the Master of Education degree must be able to include at least three credits of free electives in the program.
5. Each candidate for the Master of Education degree must complete the departmental course in Elements of Research.
6. Completion of the Master of Education degree does not lead to Instructional I teacher certification. Further information may be found in the section Teacher Certification.

Instructional Certificates

Instructional I provisional certificates (Chapter 49.82*) are issued to applicants who possess a baccalaureate degree, successfully complete a PDE-approved teacher certification program, successfully pass department-prescribed tests, and Pennsylvania Department of Education test requirements (Praxis), and receive recommendation from a college or university.

Instructional II certificates (Chapter 49.83*) are issued to applicants who complete a Pennsylvania Department of Education-approved induction program, complete three to six years of satisfactory teaching on an Instructional I certificate in approved public or non-public schools, and complete 24 semester credit hours of collegiate study or in-service programs approved by the department, as well as any other requirements identified by the Pennsylvania Department of Education.

More detailed information concerning Instructional, Educational Specialist, Supervisory, and Administrative Certificates as well as the Superintendent’s Letter of Eligibility is available from the Bureau of Teacher Certification, Department of Education, 333 Market Street, Box 911, Harrisburg, PA 17126.

Students who can qualify for admission to graduate classes are encouraged to take graduate work to earn the credits required to

maintain active certification. These credits may also count toward meeting the requirements of the Master of Education degree.

The graduate program also provides opportunities for persons who have a bachelor’s degree and a teaching certificate to extend their certification to other areas. The curricula are not designed primarily for this purpose but do provide some courses that may be applied toward certification in specific areas.

**Pennsylvania Code, Chapter 49, Certification of Professional Personnel*

Teacher Certification

Certification for educators in Pennsylvania is determined by State Board of Education Regulations, Chapter 49, Certification of Professional Personnel. Revised regulations, which became effective June 1, 2011, apply to all candidates who receive an Instructional I certificate after that date. By Department of Education policy, certificates are renewed or made permanent subject to the terms and conditions of the regulations in effect at the time the certificate was initially issued.

K-12 School Principal Certification

The Pennsylvania Department of Education has granted approval to Shippensburg University to offer a graduate program leading to the Master of Education degree in Educational Administration, which includes the certification of K-12 school principals and a post-master’s degree program leading to the certification of K-12 school principals. Detailed information concerning this program can be found under the Educational Leadership and Special Education Department.

Supervisory I Certificate

Shippensburg University offers post-master’s degree programs in the following fields leading to the Supervisory I Certificate issued by the Pennsylvania Department of Education:

- Communication/English
- Counseling
- Early Childhood Education
- Elementary Education
- Environmental Education
- Foreign Languages
- Mathematics
- Pupil Services
- Reading
- Science
- Social Studies/Citizenship
- Special Education

Superintendent’s Letter of Eligibility

Shippensburg University offers a post-master’s degree program leading to the Superintendent’s Letter of Eligibility. More detailed information on this Department of Education approved program can be found under the Educational Leadership and Special Education Department.

Responsibility

All programs in teacher education are the direct responsibility of the Dean of the College of Education and Human Services, who is designated as the official university certification officer. Policies and guidelines for teacher education programs are developed by an all-university Teacher Education Council.

COLLEGE OF ARTS AND SCIENCES

James H. Mike, Ph.D., *Dean, College of Arts and Sciences*
(717) 477-1151

Biology Department

Todd M. Hurd, Ph.D., *Chair* (717) 477-1401

Marcie L. Baer-Lehman, Ph.D.

Sherri E. Bergsten, Ph.D.

Pablo Delis, Ph.D.

Lucinda H. Elliott, Ph.D.

Emily B. Kramer, Ph.D.

Theo S. Light, Ph.D.

David R. Long, Ph.D.

Timothy J. Maret, Ph.D.

Michael R. Marshall, Ph.D.

Michael J. McNichols, Ph.D.

William J. Patrie, Ph.D.

Gregory S. Paulson, Ph.D.

Heather F. Sahli, Ph.D.

Richard L. Stewart, Ph.D.

Nathan E. Thomas, Ph.D.

BIOLOGY (M.S.)

The Master of Science degree program in biology is designed to provide a strong foundation in the biological sciences within the discipline.

All applicants for admission must have completed at least 33 semester hour credits of undergraduate biology or biology-related courses (e.g. forestry, horticulture, environmental studies), and have taken at least three chemistry courses with labs, including both inorganic and organic chemistry or biochemistry. In addition, it is recommended applicants have completed a course in evolution, mathematics through calculus, and one year of physics.

After admission to the graduate program in biology, the student will meet with his/her graduate advisor to complete a proposed course of study form.

Each candidate for a degree must complete a minimum of 31 semester hour credits. All candidates must complete BIO 593 Biometry and BIO 515 How to Research, Write, and Publish a Scientific Paper.

No more than 12 semester hours of 400 level courses may be counted toward the 31 semester hours of credit required for the master's degree.

At least 21 credits must be earned in biology courses (including courses offered by the Marine Science Consortium at Wallops Island). The remainder may be selected, with advisement, from courses such as chemistry, physics, mathematics, computer science, or geography/earth science. Candidates simultaneously working toward secondary certification may count EDU 440 Teaching of Science in Secondary Schools and EDU 441 Curriculum and Evaluation in the Secondary Science Classroom toward these remaining credits.

Specific Requirements

Master of Science in Biology (non-thesis): In addition to completing BIO 593 and BIO 515, candidates must complete 27 semester hour credits. Candidates may elect up to six of these 27 semester hour credits as graduate research.

Master of Science in Biology (thesis): In addition to completing BIO 593 and BIO 515, candidates must complete 27 semester hour credits including six semester hour credits of Thesis I and Thesis II (BIO 612 and BIO 613). Candidates may also elect up to three of these 27 semester hour credits as graduate research.

Other Requirements

1. All candidates must complete 31 semester hour credits with a 3.0 QPA in a program of study and research approved by the student's special committee.
2. The thesis must be written in manuscript style format with any material not appropriate for a scientific manuscript (i.e., voluminous tables) included as appendices. The specific style will depend on the requirements of the individual journal to which the manuscript will be submitted.
3. An oral thesis defense, advertised and open to the university community, is required.
4. One copy of the thesis will be housed in the biology department office.

COURSE REQUIREMENTS

BIO 406	Mammalogy	3
BIO 408	Principles of Virology	3
BIO 409	Immunology	3
BIO 417	Herpetology	3
BIO 418	Molecular Biology	3
BIO 423	Plant Pathology	3
BIO 430	Principles of Evolution	3
BIO 442	Aquatic Ecology	3
BIO 444	Conservation Biology	3
BIO 448	Field Botany and Plant Taxonomy	3
BIO 450	Endocrinology	3
BIO 455	Algae and Aquatic Plants	
BIO 461	Techniques in Biotechnology	3
BIO 462	Invertebrate Zoology	
BIO 463	Vertebrate Zoology	
BIO 478	Microtechniques	
BIO 485	Biological Microscopy and Imaging	3
BIO 491	Selected Topics in Biology	1-3
BIO 494	Field Research Techniques	3
BIO 513	Cytogenetics	
BIO 514	Aquatic Entomology	3
BIO 515	How to Research, Write, and Publish a Scientific Paper	1
BIO 520	Plant Ecology	3
BIO 535	Problems in Plant Physiology	
BIO 541	Ecosystems	3
BIO 547	Wetland Ecology	3
BIO 555	Comparative Environmental Physiology	3
BIO 558	Microbial Ecology	3
BIO 559	Evolutionary Ecology	3
BIO 577	Ecomorphology	3
BIO 581	Topics in Mammalian Biology	
BIO 583	Biological Techniques	
BIO 593	Biometry	3

BIO 594	Selected Topics in Biology	1-3
BIO 599	Independent Study	3
BIO 600	Biological Research Methods	
BIO 606	Graduate Research	3
BIO 609	Internship	3
BIO 612	Thesis I	3
BIO 613	Thesis II	3

BIO 515, BIO 593, BIO 612, BIO 613: Required

SCIENCE SUPERVISOR

For information concerning the post-master's degree program leading to Pennsylvania certification as a Science Supervisor, refer to the Department of Educational Leadership and Special Education (p. 71).

Communication/Journalism Department

A. Joseph Borrell, Ph.D., *Chair* (717) 477-1528
Edward J. (Ted) Carlin, Ph.D.
Michael Drager, Ph.D.
Kimberly Garris, Ph.D.
Carrie A. Sipes, Ph.D.

COMMUNICATION STUDIES (M.S.)

A minimum of 30 graduate semester hour credits is required for the completion of the Master of Science degree in communication studies. Applicants who do not have an undergraduate degree in communication/journalism or extensive professional experience in communications may be required to take additional undergraduate courses to make up this deficiency. All applicants must provide a professional resume, three professional references, and a typed 400-500 word essay on the benefits to be gained by completing this degree. The essay must demonstrate writing skills acceptable to the department. All applicants who do not have an overall undergraduate quality point average of 2.75 or greater will be required to take the Graduate Record Exam (GRE) or the Millers Analogies Test (MAT) or have significant communications work experience. Special rules apply to international students.

All students accepted into the program must apply for candidacy status for the degree after completing at least six semester hours of graduate communications (COM) courses and any graduate deficiency courses specified by the department chair, provided he or she has earned at least a 3.0, B average in all courses completed. Applications for candidacy status may be obtained from the Communication/Journalism Department office and/or website.

The communication studies program is directed to the student seeking a professionally focused program for:

1. The media professional seeking career advancement and further development of digital media and skills.
2. The media professional seeking career advancement and further development of strategic public relations skills.
3. The baccalaureate degree holder in another discipline who wishes to prepare for a career in the professional communication field.

DEGREE REQUIREMENTS

REQUIRED CORE COURSES (9 crs.)

(Students must complete all three core courses.)

COM 510	Professional Seminar	3
COM 520	Applied Mass Communication Research	3
COM 603	Professional Project in Mass Communications	3

PROFESSIONAL TRACKS REQUIRED CORE (6 crs.)

(Students must select one option and complete both courses.)

Strategic Public Relations

COM 505	Public Relations Foundations	3
COM 506	Public Relations Strategies	3

Digital Media

COM 527	Digital Storytelling	3
COM 528	Digital Media Workshop	3

ELECTIVES (15 crs. with advisement)

Students choose communications and related interdisciplinary courses to satisfy professional goals and personal interests. Students are limited to three interdisciplinary courses.

Communication Studies Electives:

COM 410	Women and the Media	3
COM 425	Feature Writing	3
COM 451	Electronic Field Production	3
COM 452	Multimedia Journalism	3
COM 460	Case Studies in Public Relations	3
COM 470	Advanced Digital Photographic Communication	3
COM 476	Magazine Design	3
COM 481	Digital Media Design	3
COM 482	Internet Communication	3
COM 484	Electronic Media Programming and Management	3
COM 490	Selected Topics in Communication/Journalism	1-3
COM 491	Selected Topics in Communication/Journalism	1-3
COM 492	Selected Topics in Communication/Journalism	1-3
COM 511	Modes of Film Communication	3
COM 516	Photographic Communication	3
COM 526	Emerging Mass Media Technologies	3
COM 530	Law and the Media	3
COM 536	World Broadcasting Systems	3
COM 570	Fund Raising and Association Public Relations	3
COM 594	Selected Topics in Communication/Journalism	1-3
COM 609	Internship I	3
COM 610	Internship II	3

Interdisciplinary Electives:

With their advisors' approval, students may select up to three interdisciplinary courses that enrich and broaden the communication studies curriculum.

400 Level Courses

Students may include no more than 12 credits of 400 level courses in their degree program.

Internships

COM 609 Internship I and COM 610 Internship II may be taken by qualified students. Each internship requires a minimum of 120 hours of work at a mass media-related organization. The main objective of the internship is to provide the student with direct experience in the operation of a newspaper, magazine, radio station, television station, public relations/advertising office, or other approved media-related organization.

Professional Organizations

A variety of professional organizations supplement instruction. There are active chapters of the National Broadcasting Society (NBS), the Public Relations Student Society of America (PRSSA), and the Society of Professional Journalists (SPJ). The department and many of its faculty belong to the Association for Education in Journalism and Mass Communications (AEJMC), the Broadcast Education Association (BEA), the Public Relations Society of America (PRSA), the Society of Professional Journalists (SPJ), the Pennsylvania Association of Broadcasters, and Pennsylvania Journalism Educators.

COMMUNICATION/ENGLISH SUPERVISOR

For information concerning the post-master's degree program leading to Pennsylvania certification as a Communication/English Supervisor, refer to Supervisory Certification Programs in the Department of Educational Leadership and Special Education (p. 71).

Computer Science and Engineering Department

Carol A. Wellington, Ph.D., *Chair* (717) 477-1424
Alice J. Armstrong, Ph.D.
Thomas H. Briggs, Ph.D.
C. Dudley Girard, Ph.D.
Jeonghwa Lee, Ph.D.
David J. Mooney, Ph.D.

COMPUTER SCIENCE (M.S.)

Computer science is a fast moving field that continues to attract professionals whose undergraduate degrees are not in computer science. The M.S. in computer science is designed for those students who want to transition from another discipline into computer science. As such, it contains background material and the equivalent of a terminal master's degree in computer science. While assuming little computer science background, the program will provide students who intend to enter the job market upon graduation with tools that will enable them to successfully adapt to technologies that are ever changing.

Full-time graduate students will take nine graduate credits per semester and graduate in two years. Part-time students can take one course in the evening during the fall and spring semesters and one or two courses in the summer to graduate in three and a half to four years. Students are admitted in any semester.

Admission Requirements

To gain admission to the Master of Science degree in computer science program, an applicant must satisfy the general admission requirements of the graduate school. Applicants whose overall quality point average is below 2.75 will be required to take the Graduate Record Examination (GRE) prior to admission. All international applicants who have not graduated from a four-year American university must take the Test of English as a Foreign Language (TOEFL). Additionally, all such applicants must achieve a score of 237 on the TOEFL (computer based).

GRADUATION REQUIREMENTS

All students are required to take 30 credits consisting of:

Core Courses

CSC 501	Algorithm Design and Analysis	3
CSC 502	Automata Theory	3
CSC 520	Computer Architecture	3
CSC 521	Operating Systems	3
CSC 523	High Performance Computing	3
CSC 570	Database Management Systems	3

Electives

CSC 514	Programming Languages	3
CSC 534	Computer Security	3
CSC 550	Scientific Visualization	3
CSC 571	Advanced Databases	3
CSC 592	Advanced Topics in Computer Science	3

Geography/Earth Science Department

William L. Blewett, Ph.D., *Chair* (717) 477-1685
Michael Applegarth, Ph.D.
Sean Cornell, Ph.D.
Scott Drzyzga, Ph.D.
Alison Feeney, Ph.D.
Thomas Feeney, Ph.D.
Kurtis Fuellhart, Ph.D.
Tim Hawkins, Ph.D., Graduate Coordinator (717) 477-1662
Claire Jantz, Ph.D.
Paul Marr, Ph.D.
George Pomeroy, Ph.D.
Janet S. Smith, Ph.D.
Kay R.S. Williams, Ph.D.
Christopher Woltemade, Ph.D.
Joseph Zume, Ph.D.

GEOENVIRONMENTAL STUDIES (M.S.)

Admission

An applicant must meet the minimum standards of the School of Graduate Studies and must have an undergraduate minimum of:

- a. 12 hours in geography or 12 hours in the earth sciences or a combined total of 18 hours in the two fields; or,
- b. 15 hours in the social sciences including 6 hours of geography and 15 hours in the natural sciences including 6 hours in the earth sciences.

Conditional admission may be granted by the departmental graduate faculty committee for a student lacking the required level of entrance credits with full admission granted after the deficiencies have been corrected and six hours of graduate work successfully completed. Applicants who do not have an overall quality point average of 2.75 or greater will be required to take the Graduate Record Exam (GRE) prior to admission. Each student will plan a program on an individual basis with the graduate faculty ensuring a balanced natural/social science background.

Mission

The Geography-Earth Science Department at Shippensburg University is committed to student learning and personal development through innovative teaching, high quality field application, and use of geotechnology in all aspects of departmental programs. These commitments will deepen student appreciation of geography-earth science, encourage lifelong learning, and prepare graduates to be successful in their future endeavors. The geoenvironmental studies graduate program is designed to be flexible in order to meet the varied needs of a wide range of students. The specific mission of the graduate program can be summarized as follows:

- Develop mastery of theoretical knowledge and provide experience with practical applications from a wide range of environmental and geotechnical disciplines.
- Provide further training and experience to increase competitiveness in the environmental and geotechnical job markets.
- Provide continuing education to fulfill professional development requirements.
- Provide a solid foundation for continued graduate education.

Core Areas

The department has several core areas in which teaching and research activities are focused. While one goal of the program is to provide broad training in environmental science, students will align with one or more faculty who will advise the student in course selection and research. As such, students must make contact with faculty members to determine where a student's specific interests lie. Below is a list of core areas:

- Land Use/Human Geography
- Techniques
- Hydrology/Climatology
- Geology

Requirements

Students are required to take at least 36 credits to complete the master's degree in geoenvironmental studies. Listed below are the

specific courses and requirements that must be completed to earn the degree.

- Students must take **GEO 503 Fundamentals of Geoenvironmental Research** during the first semester it is offered.
- Students must take a minimum of 18 credits at the 500 level, including GEO 503.
- Students may take a maximum of 12 credits at the 400 level for credit toward the M.S. degree.
- Students must take a minimum of 3 credits of geotechniques courses at either the 400 or 500 levels.
- Students may take a maximum of 6 credits outside of the department.
- Students must complete a thesis (6 credits) OR a one semester research project (3 credits) and internship (6 credits).
- Students must take and pass the departmental practical exam.

Deficiencies and Prerequisites

If an incoming student has little or no experience with geography or environmental science, s/he may be required to take undergraduate courses (not for graduate credit) to overcome these deficiencies. The department chair, graduate coordinator, and curriculum committee will establish a list of deficiencies (if any) for all students before they begin the program. Courses from other higher education institutions or appropriate professional experience may fulfill deficiencies.

Facilities

The department has two twenty-computer student labs that are equipped with the latest versions of GIS, image processing, word processing, and data analysis software as well as color and black and white laser printers. In addition, there is a small research computer lab that is equipped with specialized software along with a 42-inch plotter for poster printing. Attached to the computer labs is a communal graduate assistant office that also contains computers. Graduate students also have access to the student lounge located between the GIS labs.

The department owns numerous pieces of field equipment that can be used for classroom applications as well as student research. This equipment includes but is not limited to: digital surveying equipment, hand held and logging hydrologic and meteorological equipment, soils and geologic tools, air quality monitoring equipment, maps, and GPS units. The software associated with much of this equipment is available in the student or research computer labs. There is dedicated lab space for processing any samples that are collected for classroom or research field projects. Arrangements also exist for more sophisticated off-site sample processing. The university is also part of the Marine Science Consortium at Wallops Island. Students may take advantage of this facility during their graduate program for classroom, research, and internship opportunities.

DEGREE REQUIREMENTS

Students must take a minimum of 18 credits at the 500 level, and may take a maximum of 12 credits at the 400 level for credit toward the master of science degree. To be awarded a Master of Science in Geoenvironmental Studies degree, you must complete a minimum of 36 hours of graduate work distributed as follows:

REQUIRED COURSES:

GEO 503	Fundamentals of Geoenvironmental Research	3
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A minimum of 3 credits of geotechniques from the following:

GEO 420	GIS III: Advanced Geographic Information Systems	3
GEO 425	Image Processing	3
GEO 440	Field Techniques	3
GEO 441	Quantitative Methods	3
GEO 517	Applied Geographic Information Systems	3
GEO 530	Mapping Sciences	3

GEO 503: (restricted to Geoenvironmental majors)

ELECTIVES:

ESS 404	Applied Meteorology and Climatology	3
ESS 413	Mineral and Rock Resources	3
ESS 442	Environmental Geology	3
GEO 402	Medical Geography	3
GEO 404	Groundwater and Hydrogeology	3
GEO 415	Regional Geographic Studies	3
GEO 420	GIS III: Advanced Geographic Information Systems	3
GEO 425	Image Processing	3
GEO 440	Field Techniques	3
GEO 441	Quantitative Methods	3
GEO 444	Environmental Land-Use Planning	3
GEO 446	Water Resources Management	3
GEO 450	Geography-Geology Field Studies	1-3
GEO 490	Selected Topics in Geography	1-3
GEO 514	Urban Environment	3
GEO 517	Applied Geographic Information Systems	3
GEO 522	Geoenvironmental Hydrology	3
GEO 524	The Geologic Environment	3
GEO 528	Geography of Economic and Environmental Systems	3
GEO 530	Mapping Sciences	3
GEO 531	Geomorphology	3
GEO 532	Disease and the Environment	3
GEO 536	Problems of the Atmospheric Environment	3
GEO 542	Land-Use Regulations	3
GEO 546	Geoenvironmental Research I	3
GEO 548	Geoenvironmental Research II	3
GEO 594	Selected Topics in Geography	1-3
GEO 599	Independent Study	3

INTERNSHIP OR THESIS:

Six credits of internship or thesis must be taken. If an internship is taken, a 3-credit research course (GEO594 or GEO599) is required.

GEO 609	Internship I	3
GEO 610	Internship II	3
GEO 612	Thesis I	3
GEO 613	Thesis II	3

Students pursuing both a Master of Science in Geoenvironmental Studies AND Teacher Certification in Geography-Social Studies or Earth-Space Science, may use EDU 495 Student Teaching and Professional Practicum (6 credits) in place of GEO 609 Internship I and Internship II.

NATURAL/SOCIAL SCIENCE ELECTIVES:

Up to 6 credits may be taken from outside Geography-Earth Science by advisement.

History and Philosophy Department

Steven Burg, Ph.D., *Chair* (717) 477-1189

Kwabena Akurang-Parry, Ph.D.

Douglas Birsch, Ph.D.

John D. Bloom, Ph.D.

Catherine Clay, Ph.D.

Betty A. Dessants, Ph.D.

Allen Dieterich-Ward, Ph.D.

James Edwards, Ph.D.

David F. Godshalk, Ph.D.

Kim Klein, Ph.D.

Chandrika Paul, Ph.D.

Gretchen Pierce, Ph.D.

John Quist, Ph.D.

Christine Senecal, Ph.D.

Robert Shaffer, Ph.D.

Jonathan Skaff, Ph.D.

Mark E. Spicka, Ph.D.

Allan A. Tulchin, Ph.D.

Brian Ulrich, Ph.D.

APPLIED HISTORY (M.A.)

The graduate program in Applied History is designed for college graduates seeking advanced historical training and educators seeking professional development opportunities. For those seeking careers in the field of public history, the program offers coursework and professional internships to prepare students for employment in museums and historical institutions. Educators will find a diverse array of courses in United States history, world history, and historical methods that will deepen their historical knowledge and provide new resources for classroom use. (All courses can be used to help satisfy Pennsylvania's Act 48 requirements.) The curriculum provides a rigorous historical training that can also prepare students for further graduate work in history or library studies. Recent graduates have secured teaching positions at community colleges, obtained research and editorial positions in both public and private sector, and started public history careers with organizations such as History Associates Incorporated, the U.S. Army Heritage and Education Center, the U.S. Army Military History Institute, and the National Park Service.

Admission Requirements

To be eligible to pursue a Master of Arts in Applied History, you must:

- Have a baccalaureate degree from an accredited college or university.
- Present an official transcript showing at least a 2.75 cumulative quality point average for your undergraduate studies.

If you have less than a 2.75 cumulative undergraduate quality point average, you may be accepted following an interview and the submission of a 500-word Statement of Purpose in which you provide additional evidence of your interest in history, your potential as a graduate student, and your reasons for pursuing graduate studies.

DEGREE REQUIREMENTS

The degree can be earned in approximately one and one-half years of full-time study or several years of part-time study. To be awarded an M.A. in applied history, you must complete a minimum of 30 hours of graduate work distributed as follows:

REQUIRED COURSES (12 crs.)

HIS 600	Historical Research Methods	3
	OR	
HIS 601	Research in Local and Regional History	3
HIS 501	Introduction to Applied History	3
HIS 609	Internship I	3
HIS 610	Internship II	3
	OR	
HIS 612	Thesis I	3
HIS 613	Thesis II	3
	OR	
EDU 495	Student Teaching and Professional Practicum	9-15

RESTRICTED ELECTIVES (9 crs.)

Chosen within the following fields:

I. History of the Americas (3 crs.)

HIS 402	Revolutionary America	3
HIS 428	Issues in the Gilded Age and Progressive Era	3
HIS 430	U.S. Cultural History	3
HIS 490	Selected Topics in History	1-3
HIS 513	Seminar in U.S. Women's History	3
HIS 515	Seminar in 20th Century U.S. Social History	3
HIS 516	Seminar in African American History	3
HIS 519	Seminar in International Relations	3
HIS 525	Seminar in U.S. Regional History	3
HIS 526	Seminar in the Civil War Era	3
HIS 594	Selected Topics in History	1-3
HIS 599	Readings in History	3-6
HIS 601	Research in Local and Regional History	3

HIS 490, HIS 594, HIS 599: With advisement

HIS 601: (if not used to satisfy the research requirement)

II. Global Connections and Comparisons (3 crs.)

HIS 407	Women in Comparative Perspective	3
HIS 410	The Islamic World	3
HIS 423	Issues in 20th-Century Europe	3
HIS 454	China and the Outside World	3
HIS 490	Selected Topics in History	1-3
HIS 499	Historiography	3
HIS 501	Introduction to Applied History	3
HIS 512	Seminar in Comparative Labor History	3
HIS 514	Population in History	3

HIS 519	Seminar in International Relations	3
HIS 532	20th Century Europe	3
HIS 534	Seminar in Modern German History	3
HIS 535	Seminar in Medieval Studies	3
HIS 543	Environmental History	3
HIS 558	Seminar in East Asia and the Modern World	3
HIS 562	Seminar in African History	3
HIS 593	Selected Topics in History	3
HIS 599	Readings in History	3-6

HIS 490, HIS 593, HIS 599: With advisement

HIS 501: (if not used to satisfy the research requirement.)

III. Applied History Skills (3 crs.)

HIS 505	Advanced Topics in Public History	3
HIS 433	Oral History	3
HIS 502	Introduction to Archives	3

HISTORY ELECTIVES (9 crs.)

Any course not used to satisfy Restricted Electives

INTERDISCIPLINARY ELECTIVES

With permission of their graduate advisor and the department chair, students may substitute up to two graduate courses (6 crs.) for their history electives. These courses should come from other Shippensburg University departments and help students to fulfill their personal interests and professional objectives.

Political Science Department

Curtis R. Berry, Ph.D., *Chair* (717) 477-1718

Cynthia A. Botteron, Ph.D.

C. Nielsen Brasher, Ph.D.

Alison D. Dagnes, Ph.D.

Michael Greenberg, Ph.D.

Sara A. Grove, Ph.D., J.D.

Steven B. Lichtman, Ph.D., J.D.

Amanda M. Olejarski, Ph.D.

Mark D. Sachleben, Ph.D.

Lonce Sandy-Bailey, Ph.D.

Ronnie B. Tucker, Ph.D.

PUBLIC ADMINISTRATION (M.P.A.)

In addition to the requirements for admission to graduate classes, the applicant for admission to the Master of Public Administration degree program must present a minimum of six semester hour credits in government or political science. Students will be required to make up any deficiencies in their undergraduate work. Admission Requirements also include a current resume and a two- to three-page writing sample (double spaced).

Applicants who do not have an overall quality point average of 2.75 or greater will be required to pass a personal interview to evaluate life experiences or take either the Graduate Record Exam (GRE) or the Miller Analogies Test (MAT) prior to admission.

The Master of Public Administration degree program requires the completion of a minimum of 36 semester hour credits of graduate work. Each student's program will include core courses and a six-credit thesis or an internship.

Organizational Theory and Behavior, PLS 501, should be among the first core courses taken by students. PLS601 is a prerequisite for Public Policy Analysis, PLS 603. PLS 605 should be taken as late as possible in a student's program to provide a capstone experience. Part, or all, of the internship requirement can be waived for mid-career applicants with substantial experience.

DEGREE REQUIREMENTS

REQUIRED CORE COURSES (18 crs.)

PLS 501	Organizational Theory and Behavior	3
PLS 502	Human Resources Management	3
PLS 503	Foundations of Public Budgeting and Finance	3
PLS 601	Research Methods	3
PLS 603	Public Policy Analysis	3
PLS 605	Applied Management Techniques in Public Administration	3

EXPERIENTIAL REQUIREMENTS (6 crs.)

PLS 611	Internship I	3
PLS 612	Internship II	3
	OR	
PLS 621	Thesis I	3
PLS 622	Thesis II	3

ELECTIVES (12 crs.)

PLS 431	Pennsylvania Local Government	3
PLS 504	Ethics for Public Service Managers	3
PLS 511	State Government	3
PLS 512	Intergovernmental Relations and Programs	3
PLS 521	Collective Bargaining and Labor Relations in the Public Sector	3
PLS 551	Planning and Public Policy	3
PLS 552	Seminar in Urban-Rural Planning	3
PLS 561	Administrative Law	3
PLS 591	Selected Topics in Political Science	3

Psychology Department

Lea Adams, Ph.D., *Chair* (717) 477-1115
 Angela M. Bartoli, Ph.D.
 Corrine Bertram, Ph.D.
 Jamonn Campbell, Ph.D.
 Kenneth France, Ph.D.
 James D. Griffith, Ph.D.
 Steven J. Haase, Ph.D.
 Robert L. Hale, Ph.D.
 Scott F. Madey, Ph.D.
 Suzanne M. Morin, Ph.D.
 Virginia E. Pitts, Ph.D.
 Kathryn Potoczak, Ph.D.
 Toru Sato, Ph.D.
 Ashley Seibert, Ph.D.
 Adrian Tomer, Ph.D.
 Kim Weikel, Ph.D.

PSYCHOLOGICAL SCIENCE (M.S.)

The Master of Science in Psychological Science degree is a two-year program designed to provide 1) advanced general knowledge of the field, 2) specialized knowledge of subfields, and 3) opportunities to develop appropriate research skills. By providing three separate tracks, the program is flexible enough for students to design a course of study appropriate for their specific needs. Students must declare their commitment to a track by the beginning of their second year.

1. The Research Track is appropriate for those students seeking degrees beyond the master's level. This track allows students to specialize in a subarea of psychology via elective selection and a required thesis (Thesis I and II). This track requires completion of at least one course in the student's thesis/specialty area plus Thesis I and Thesis II.
2. The Applied Track is appropriate for graduates who are trying to secure employment in industry, government, or nonprofits immediately after graduation. Students have opportunities to take courses with more applied emphases (e.g., Human Factors, Cognitive Science, and Applied Behavior Analysis (ABA) coursework) and have two semesters of real-world experience (Field Experience I and II) in industry settings. This track requires completion of at least one course in an applied area plus Field Experience I and Field Experience II.
3. The General/Reading Track is designed to meet the needs of those seeking to continue education or advance in their current place of employment. Students will take basic required scientific courses, fulfill cluster requirements, and take additional coursework to broaden their scope. Their competence will be demonstrated by passing a comprehensive oral exam. This track requires completion of three electives in areas related to their interests plus successful completion of a comprehensive oral exam.

To be considered for admission to the M.S. in Psychological Science program, the following minimum requirements must be met. An applicant must:

- Have a baccalaureate degree from an accredited college or university
- Have a minimum 2.75 quality point average
- Have a minimum of nine credit hours, successfully completed, in psychology
- Have at least one course, successfully completed, in statistics

While admission is on a rolling basis, students begin the program of study during the fall semester only (ABA students may begin in summer).

DEGREE REQUIREMENTS

A total of 30 semester hour credits of graduate work is required for the master of science degree.

I. REQUIRED (6-12 crs.)

PSY 500	Advanced Research Design and Statistics I	3
PSY 501	Advanced Research Design and Statistics II	3

Note: PSY 500 has a residency requirement—it must be taken from the Department of Psychology

II. CORE COURSES (12 crs.)

(Choose one from each of the following four areas)

Learning and Motivation

PSY 512	Theories of Learning	3
PSY 516	Motivation	3
PSY 536	Behavioral Research and Ethics	3
PSY 540	History of Psychology	3

Developmental and Social

PSY 519	Life Span Psychology	3
PSY 527	Studies in the Psychology of Adolescence	3
PSY 529	Psychology of Successful Aging	3
PSY 533	Advanced Social Psychology	3
PSY 590	Introduction to Group Dynamics	3

Personality and Abnormal

PSY 515	Theories of Personality	3
PSY 518	Introduction to Behavior Analysis	3
PSY 530	Studies in the Psychology of the Exceptional Child	3
PSY 534	Survey of Research in Abnormal Behavior	3
PSY 535	Behavioral Assessment	3
PSY 543	Behavioral Treatment and Systems Support	3

Cognitive

PSY 531	Advanced Cognitive Psychology	3
PSY 565	Human Factors	3
PSY 570	Seminar in Cognitive Science	3

III. ELECTIVES (6-12 crs.)

PSY 594	Selected Topics in Psychology	3
PSY 595	Selected Topics in Psychology	3
PSY 596	Selected Topics in Psychology	3
	Additional Cluster Courses (up to four)	

IV. ADDITIONAL PROGRAM REQUIREMENTS

Research Track (6 crs.)

PSY 612	Thesis I	3
PSY 613	Thesis II	3

Applied Track (6 crs.)

PSY 621	Field Experience I	3
PSY 622	Field Experience II	3

General/Reading Track (12 total crs. of electives)

Comprehensive Exam

Students completing Thesis I must also complete Thesis II to be awarded credit for Thesis I.

Visit our website at www.ship.edu/psychology/ for the most current program information.

Sociology/Anthropology Department

Barbara J. Denison, Ph.D., Chair, Director, Organizational Development and Leadership Program (717) 477-1257
 Dina Banerjee, Ph.D.
 Philip Broyles, Ph.D.
 Allison Carey, Ph.D.
 Debra Cornelius, Ph.D.
 Cynthia Drenovsky, Ph.D.
 Chad Kimmel, Ph.D.
 Robert Pineda-Volk, Ph.D.
 Ying Yang, Ph.D.

ORGANIZATIONAL DEVELOPMENT AND LEADERSHIP (M.S.)

The Organizational Development and Leadership Program is designed for those students pursuing leadership positions in various career fields. Its objective is to apply the critical view of organizations from social scientific perspectives and enhance students' understanding of how organizations operate and change over time. The performance and role of leadership in formal and informal settings is an integral part of the program. In addition, students will have the opportunity to develop skills and increase their knowledge in selected discipline areas.

The Master of Science in Organizational Development and Leadership is an interdisciplinary program that will provide students with several opportunities:

1. To learn basic principles and theories of organizational development and the role of leadership.
2. To enhance skills and knowledge in specified content areas.
3. To combine theory with practical experience through an internship in the student's concentration.

Admission Requirements

Applicants must have a baccalaureate degree from an accredited college or university and have a minimum cumulative undergraduate quality point average of 2.75. If GPA was below 2.75, an interview may be requested. Submit the graduate application along with a current résumé, a one-page personal goals statement, an undergraduate transcript, and the non-refundable application fee.

DEGREE REQUIREMENTS

CORE COURSES (12 crs.)

SOC 550	Leadership Theory and Practice	3
SOC 560	Leadership, Change, and Innovation	3
PLS 501	Organizational Theory and Behavior	3
PLS 601	Research Methods	3

CAPSTONE EXPERIENCE (6 crs.)

(recommended after 18-21 crs.)

SOC 570	Applied Organizational and Leadership Analysis	3
SOC 609	Sociology Graduate Internship	3

(Internship within concentration area)

CONCENTRATION AREAS AND SELECT RECOMMENDED ELECTIVES (12 crs.)

This concentration is designed for students without a business or business-related undergraduate degree.

Business

BSN 510	Economic and Information Systems Environment	4
BSN 511	Business Operations and Analysis	4
BSN 512	Essentials of Accounting and Finance	4
BSN 513	Organizational Behavior and Marketing	4
MBA 547	Management Information Systems and Applications	3

Communication

COM 410	Women and the Media	3
COM 460	Case Studies in Public Relations	3
COM 482	Internet Communication	3
COM 484	Electronic Media Programming and Management	3
COM 490	Selected Topics in Communication/Journalism	1-3
COM 500	Communication Theory	
COM 516	Photographic Communication	3
COM 526	Emerging Mass Media Technologies	3
COM 530	Law and the Media	3
COM 536	World Broadcasting Systems	3
COM 544	Advanced Communication Problems	
COM 561	Press and Public Affairs	
COM 570	Fundraising and Association Public Relations	3
COM 600	Introduction Mass Communication Research	

Other courses as directed in consultation with the ODL advisor.

ODL students in this concentration are advised COM 600 may be taken to replace PLS 601 in core; an additional concentration course will be necessary if that substitution is made.

Environmental Management

GEO 415	Regional Geographic Studies	3
GEO 440	Field Techniques	3
GEO 444	Environmental Land-Use Planning	3
GEO 446	Water Resources Management	3
GEO 490	Selected Topics in Geography	1-3
GEO 522	Geoenvironmental Hydrology	3
GEO 524	The Geologic Environment	3
GEO 528	Geography of Economic and Environmental Systems	3
GEO 532	Disease and the Environment	3
GEO 536	Problems of the Atmospheric Environment	3
GEO 542	Land-Use Regulations	3
GEO 594	Selected Topics in Geography	1-3

Other courses as directed in consultation with the ODL advisor.

Higher Education Structure and Policy

CNS 562	Student Personnel Work in Higher Education	3
ESC 400	Methods of Coaching	3
PLS 504	Ethics for Public Service Managers	3
PLS 603	Public Policy Analysis	3
PSY 516	Motivation	3
SOC 435	Gender, Organizations, and Leadership	3
SOC 445	Sexuality and Sexual Orientation: A Social Approach	3
SOC 530	Sociology of Higher Education	3
SOC 594	Selected Topics in Sociology	3

Other courses as directed in consultation with the ODL advisor.

Note: ESC 400: (restricted, see ODL advisor)

Historical Administration

HIS 433	Oral History	3
HIS 501	Introduction to Applied History	3
HIS 502	Introduction to Archives	3
HIS 505	Advanced Topics in Public History	3
HIS 513	Seminar in U.S. Women's History	3
HIS 515	Seminar in 20th Century U.S. Social History	3
HIS 594	Selected Topics in History	1-3
HIS 599	Readings in History	3-6
HIS 600	Historical Research Methods	3
	OR	
HIS 601	Research in Local and Regional History	3

Other courses as directed in consultation with the ODL advisor.

ODL students in this concentration are advised to select HIS 600 or HIS 601 to replace PLS 601 in core; an additional concentration course will be necessary if that substitution is made.

Individual and Organizational Development

PSY 512	Theories of Learning	3
PSY 515	Theories of Personality	3
PSY 519	Life Span Psychology	3
PSY 529	Psychology of Successful Aging	3
PSY 533	Advanced Social Psychology	3
PSY 565	Human Factors	3
PSY 590	Introduction to Group Dynamics	3
PSY 595-597	Selected Topics	

Other courses as directed in consultation with the ODL advisor.

Management Information Systems

ISS 515	Information Systems Project Management	3
MBA 547	Management Information Systems and Applications	3
ISS 550	Database Design	3
ISS 570	Information Analysis	3

Public Organizations

PLS 502	Human Resources Management	3
PLS 504	Ethics for Public Service Managers	3
PLS 511	State Government	3
PLS 512	Intergovernmental Relations and Programs	3
PLS 561	Administrative Law	3
PLS 591	Selected Topics in Political Science	3
PLS 603	Public Policy Analysis	3

Other courses as directed in consultation with the ODL advisor.

Social Structures and Organization

SOC 410	Family and Society	3
SOC 435	Gender, Organizations, and Leadership	3
SOC 445	Sexuality and Sexual Orientation: A Social Approach	3
SOC 490	Selected Topics in Sociology	1-3
SOC 530	Sociology of Higher Education	3
SOC 594	Selected Topics in Sociology	3

Other courses as directed in consultation with the ODL advisor.

Additional courses are available with the approval of the program director.

APPLIED EXPERIENCES (6 CRS.)

All students must fulfill the capstone experience that requires completion of a 3 credit internship in some administrative capacity within their concentration area. The internship is ideally taken simultaneously with the Applied Leadership and Organizational Analysis course where students will complete an organizational analysis project.

JOHN L. GROVE COLLEGE OF BUSINESS

John L. Grove College of Business

John G. Kooti, Ph.D., Dean, John L. Grove College of Business
(717) 477-1435

Anthony Winter, D.Ed., Associate Dean, John L. Grove College
of Business (717) 477-1620

Robert Stephens, Ph.D., *MBA Director* (717) 477-1684

Justin English, Director of Business Internships and MBA
Recruiting (717) 477-1351

Joseph Beck, Ph.D., Management

Wendy Becker, Ph.D., Management

Sarah Bryant, Ph.D., Finance

Jerry Carbo, Ph.D., Management

Joseph Catanio, Ph.D., Management Information Systems

Sunhee "Sunny" Choi, Ph.D., Marketing

Michael Coolsen, Ph.D., Marketing

Azim Danesh, Ph.D., Management Information Systems

Viet Dao, Ph.D., Management Information Systems

Nathan Goates, Ph.D., Management

Louise Hatfield, Ph.D., Management

Irma Hunt, Ph.D., Information Technology for Business
Education

Ian Langella, Ph.D., Supply Chain Management

James Mackie, Ph.D., Accounting

Shelley Morrisette, Ph.D., Management

Robert Neidigh, Ph.D., Supply Chain Management

William Oberman, Ph.D., Management

Hong Rim, Ph.D., Finance

Robert Setaputra, Ph.D., Supply Chain Management

Robert Stephens, Ph.D., Management

Ronald Taylor, Ph.D., Marketing

Vicki Taylor, Ph.D., Human Resource Management

Joanne Tucker, Ph.D., Supply Chain Management

Allison Watts, Ph.D., Management

Brian Wentz, Ph.D., Management Information Systems

BUSINESS ADMINISTRATION (MBA)

The John L. Grove College of Business is accredited by AACSB International, which certifies the quality of the curriculum, faculty, and support services. The Ship MBA program offers high quality and outstanding value with courses taught by highly qualified faculty, who will help you develop the knowledge and skills you need to succeed in a rapidly changing global economy. Our graduate students find the Ship MBA convenient, reputable, and affordable.

The program consists of ten courses (30 credits), which includes eight core courses and two elective courses. The core courses cover critical elements of business management in today's technologically advanced and global business environment. The course sequence is flexible, as most core courses do not have prerequisites beyond the basic requirements to enter the MBA program.

Ship delivers its MBA degree program in three convenient formats: part time, full time, and online. The requirements are the same in each of the three delivery formats. Students can also select the Supply Chain Management Concentration or Management Information Systems Concentration.

Part time

The Ship MBA-Professional is a hybrid format program designed for working professionals. Students can complete the program part time in two years, taking two classes one night a week. One-third of each course is composed of online content, while two-thirds of each course is taught in an electronic classroom and broadcast synchronously to remote sites via video-conferencing technology, thus providing students the opportunity to interact with the professor and other students face-to-face from multiple sites. These sites include:

- Shippensburg University campus
- Dixon University Center, Harrisburg
- York Learning Center, York
- East Stroudsburg University campus

Most class meetings are digitally recorded, so that when students cannot attend class due to work requirements, they may view the missed classes online via video streaming. Employers desiring to have their electronic conference room added as a video conferencing site for the Shippensburg MBA should contact the MBA office.

Full time

The Ship MBA-Emerging Leaders is a full-time cohort program designed for recent college graduates. This one-year cohort program combines classroom study with an optional business practicum that provides students the opportunity to gain meaningful professional experience while extending their studies at the graduate level. Students will attend classes all day on Wednesday in Harrisburg or Shippensburg, allowing for a Business Practicum to be scheduled according to student and employer needs. The cohort format encourages camaraderie and support among classmates since the same group of students moves through the degree program together.

Online

The Ship MBA is also delivered in a convenient 100 percent online format. Online courses allow students more flexibility in scheduling their time, but each course also includes optional opportunities to interact with the faculty member and other students directly through web-conferencing. Classes are offered in accelerated eight-week sessions.

Some exams may be proctored and require students to arrange an appointment at an approved proctoring site. Students can complete the entire program in an online format on a part-time basis in two years.

Admission Requirements

Undergraduate coursework and degree, relevant work experience, essay, and GMAT score will be evaluated and form the basis for admission. To be eligible for admission to the MBA program applicants must:

- Have a baccalaureate degree from a regionally accredited college or university.
- Present a current resume.
- Present a goals statement.
- Provide a GMAT score of 450 or higher if applicant has less than five years of mid-level experience, including management experience, or for whom additional evaluation is needed.

In addition, applicants are required to meet the following prerequisites:

- Work experience or undergraduate credits in:
 - Quantitative analysis,
 - Computer usage, and
 - Oral and written communications (see below)
- Prerequisite knowledge in accounting, economics, finance, organizational behavior, marketing, and operations management (see below)

COURSE REQUIREMENTS

Quantitative analysis, computer usage, and oral and written communications are covered in the following courses:

ENG 101	College Writing	3
SCM 200	Statistical Applications in Business	3
MIS 142	Business Computer Systems	3
HCS 100	Introduction to Human Communication	3

Prerequisite knowledge in accounting, economics, finance, organizational behavior, marketing, and operations managements are covered in the following courses:

BSN 510	Economic and Information Systems Environment	4
BSN 511	Business Operations and Analysis	4
BSN 512	Essentials of Accounting and Finance	4
BSN 513	Organizational Behavior and Marketing	4

CORE COURSES (24 crs.)

MBA 502	Managerial Accounting	3
MBA 529	Global Managerial Finance	3
MBA 552	Entrepreneurship	3
MBA 554	International Business	3
MBA 556	Organizational Leadership	3
MBA 565	Information Management and Analysis for Decision Making	3
MBA 577	Supply Chain Management	3
MBA 593	Strategic Management	3

ELECTIVE COURSES (6 crs.)

MBA 532	Marketing Research	3
MBA 533	Business Operations and Logistics Planning	3
MBA 534	Buyer Behavior	3
MBA 547	Management Information Systems and Applications	3
MBA 548	IT Management and Innovation	3
MBA 577	Supply Chain Management	3
MBA 558	Ethics and Sustainability	3
MBA 561	Human Resources and Development	3
MBA 570	Marketing Management	3
MBA 571	International Marketing Management	3
MBA 572	Marketing in a Technological Environment	3
MBA 575	Global Supply Chain Management	3
MBA 594	Selected Topics	
MBA 595	Selected Topics	3
MBA 596	Business Practicum	3
MBA 599	Independent Studies	3

MBA 550	European Business Environment	3
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Other Electives from Arts and Science and Education (pending approval of MBA Director)

Management Information Systems Concentration

The MBA with Management Information Systems Concentration is a 36-credit option that is delivered in hybrid format in Harrisburg and Shippensburg. It is not available online.

Concentration Requirements (36 crs.)

Students take the eight required MBA core courses (24 crs.) plus four management information systems courses (12 crs.).

ISS 515	Information Systems Project Management	3
ISS 550	Database Design	3
ISS 570	Information Analysis	3
MBA 547	Management Information Systems and Applications	3

Supply Chain Management Concentration

The MBA with Supply Chain Management concentration is a 36-credit option that is delivered in a 100 percent online format and is available to all MBA students regardless of location or track selection.

Concentration Requirements (36 credits)

Students take the eight required MBA core courses (24 crs.) plus four supply chain specific courses (12 crs.).

SCM 510	Introduction to Logistics and Transportation Management	3
SCM 515	Procurement Management	3
SCM 555	Supply Chain Quality Management	3
SCM 570	Supply Chain Management Theory and Practice	3
SCM 590	Warehousing and Distribution Management	3

For more information contact (717) 477-1483 or mba@ship.edu.

Post-Graduate Programs in Supply Chain and Logistics Management

Shippensburg University offers two online programs for professionals seeking to upgrade their supply chain and logistics skill sets in order to become more competitive in a global marketplace: Advanced Supply Chain and Logistics Management Certificate and a Letter of Completion in Supply Chain and Logistics Management.

The programs are offered by faculty from the Department of Finance and Supply Chain Management. Shippensburg University has a long established supply chain program, the first in the Pennsylvania State System of Higher Education and one of the first in Pennsylvania. Our faculty are both expert teachers and publishing scientists, ensuring that the program contains cutting-edge knowledge in the craft and delivered in a manner that maximizes retention and knowledge transfer. Many of our faculty members have years of industrial experience.

Admission Requirements

Applicants must:

- Have a bachelor's degree from a regionally accredited institution.
- Possess at least two years of full-time work experience.
- Submit a completed application
- Have official undergraduate and graduate (if applicable) transcripts sent to Shippensburg University

Applications must be submitted no later than the completion of 6 credits in the program. A student must earn a minimum GPA of 3.0 to be awarded the certificate.

ADVANCED SUPPLY CHAIN AND LOGISTICS MANAGEMENT CERTIFICATE

The Advanced Supply Chain and Logistics Management Certificate program is designed for working professionals in and out of supply chain and logistics management who are in need of an in-depth education in the field for enhanced career opportunities. In some instances, individuals with little or no educational background have had successful careers within the field and require a formal education. Others may wish to begin a career in the field and the program is designed to provide coverage of a wide variety of subject areas central to the profession.

The program is also appropriate for individuals who have education or experience in science, engineering, or liberal arts, have employment in SCM or logistics management (LM) related fields, and wish to strengthen their marketability in the fields of SCM or LM. Finally, many individuals in the armed forces worked in the area of logistics for the military. While this has excellent practical experience, these individuals may wish a formal education in SCM or LM to enhance their career opportunities.

This graduate certificate has been specifically designed to meet the needs of working professionals, and it will be offered completely online and in a way that it can be completed within one calendar year. Students can expect to be exposed to the latest theories, illustrated with case studies and experiential learning activities that make the learning atmosphere applicable and fun. Students complete 6-7 courses; each course is 3 credits.

For registration information please go to ship.edu/PCDE/Registration_Information/.

For tuition information please go to ship.edu/Student_Accounts.

If you are receiving financial assistance from your employer to pay your tuition and/or fees, please be sure to review and complete the necessary form at: ship.edu/Student_Accounts/Forms.

REQUIRED COURSES

Required courses provide a comprehensive overview of contemporary theory and practice of Supply Chain Management and Logistics Management. Students complete 6-7 courses for 18-22 credits.

SCM 510	Introduction to Logistics and Transportation Management	3
SCM 570	Supply Chain Management Theory and Practice	3
SCM 515	Procurement Management	3
SCM 555	Supply Chain Quality Management	3
SCM 590	Warehousing and Distribution Management	3
SCM 420	Global Logistics Systems	3
BSN 511	Business Operations and Analysis	4

BSN511 Business Operations and Analysis (4 credits) is required for individuals with an undergraduate degree in a non-business major. However, with appropriate work experience in the fields of supply chain or logistics management, BSN 511 may be waived.

LETTER OF COMPLETION IN SUPPLY CHAIN AND LOGISTICS MANAGEMENT

The Letter of Completion in Supply Chain and Logistics Management (SCLM) is designed for working professionals who would like a formal credential in supply chain and logistics management, but do not have the need for a complete graduate certificate. As such, it is similar to the graduate certificate but can be completed in less time with less coursework. There are two to three required courses and one elective course.

The letter of completion will be useful for professionals who seek to advance their knowledge of supply chain and logistics management either because they are currently working in the field and have academic qualifications outside of SCLM or those who wish to enter the field in order to advance their career possibilities. Members of the military with experience in logistics who are transitioning may find this letter of completion a particularly advantageous way to signal to employers that they possess not only experience but also formal knowledge in the area.

The letter of completion has been specifically designed to meet the needs of working professionals. Students complete three to four courses that are offered completely online; each course is 3 credits. Students can expect to be exposed to the latest theories, illustrated with case studies and experiential learning activities, that make the learning atmosphere applicable and fun.

For registration information please go to ship.edu/PCDE/Registration_Information/.

For tuition information please go to ship.edu/Student_Accounts.

If you are receiving financial assistance from your employer to pay your tuition and/or fees, please be sure to review and complete the necessary form at: ship.edu/Student_Accounts/Forms.

REQUIRED COURSES

There are three required courses (one of which may be waived with suitable prior education or work experience) and one elective course where the candidate can choose the course they feel will best serve their career. Each course is 3-4 credits each for a total of 9-12 credits for the Letter of Completion.

SCM 510	Introduction to Logistics and Transportation Management	3
SCM 590	Warehousing and Distribution Management	3
BSN 511	Business Operations and Analysis	4

BSN511 Business Operations and Analysis (4 credits) is required for individuals with an undergraduate degree in a non-business major. However, with appropriate work experience in the fields of supply chain or logistics management, BSN 511 may be waived.

ELECTIVE COURSES

Students must choose one of the following electives.

SCM 515	Procurement Management	3
SCM 590	Warehousing and Distribution Management	3

ADVANCED STUDIES IN BUSINESS CERTIFICATE

The Certificate of Advanced Studies in Business allows professionals from various backgrounds to learn how management principles can be applied in any business or organization. Professionals will select four courses from five offerings that teach the essentials of business management and cover such topics as financial and operations management, employee and customer relations, external economic environment, and strategic direction and leadership.

These courses will also meet the needs of professionals who wish to earn an M.B.A. but lack the necessary course prerequisites. A 16-credit program designed for working professionals who have an undergraduate degree in an area other than business and wish to gain business knowledge for personal or career advancement.

Each course is 4 credits, limited to twenty to twenty-five students, and offered 100 percent distance education: 50 percent video-conferencing and 50 percent online.

Admission Requirements

Applicants must:

- Have a bachelor's degree from an accredited institution.
- Submit a completed application.
- Have official undergraduate and graduate (if applicable) transcripts sent to Shippensburg University.

There is no admission fee for the certificate program.

Applications must be submitted no later than the completion of 8 credits in the program.

Registration

For registration information please go to http://www.ship.edu/PCDE/Registration_Information/

For tuition information please go to http://www.ship.edu/Student_Accounts.

If you are receiving financial assistance from your employer to pay your tuition and/or fees, please be sure to review and complete the necessary form at:

https://www.ship.edu/Student_Accounts/Forms.

DEGREE REQUIREMENTS

Courses (4 crs. each)

BSN 510	Economic and Information Systems Environment	4
BSN 511	Business Operations and Analysis	4
BSN 512	Essentials of Accounting and Finance	4
BSN 513	Organizational Behavior and Marketing	4
BSN 514	Strategic Management and Leadership	4

M.B.A. OPTION

Option to transfer to M.B.A. program:

- BSN 510, BSN 511, BSN 512, and 513 may be used to satisfy M.B.A. prerequisite/foundation requirements.
- Those individuals who earn a certificate with a 3.0 or better in each course, and have taken BSN 510, BSN 511, BSN 512, and BSN 513 may apply to the M.B.A. without taking the GMAT, and will be accepted based on space availability, if they have a baccalaureate degree from an accredited college or university.
- Application to the M.B.A. program must be made no later than the completion of 12 credits.

Post-Bachelor Programs in Management Information Systems (MIS)

Shippensburg University offers two post-bachelor's programs for working professionals who seek to upgrade their management and technical skill sets to become more fluent in a technologically challenging environment: the Management Information Systems Graduate Certificate and Letter of Completion.

Both of these programs are designed to meet the needs of working professionals and can be completed in one to two years, by taking one to two courses per semester, depending upon students' schedule and availability. Students may take the program at Shippensburg University or at the Dixon University Center in Harrisburg. Videoconferencing technology links students and faculty at these two locations in real time. Approximately one-third of each course is completed online. Each class is limited to twenty-five students, allowing students to interact directly with their faculty member on a regular basis.

Students interested in pursuing an MBA degree at Shippensburg University can apply two of the core courses toward meeting the MBA elective requirement.

To be eligible for admission to the graduate certificate or letter of completion in management information systems, applicants must:

- Have a bachelor's degree from an accredited institution.
- Complete a non-degree graduate application online at [www.ship.edu/PCDE/ Non-degree](http://www.ship.edu/PCDE/Non-degree).
- Complete the paper application specific to this program posted at www.ship.edu/PCDE/MIS/Admissions.
- Submit official undergraduate AND graduate (if applicable) transcript.

MIS CERTIFICATE

The Management Information Systems Certificate is an 18-credit program with four required courses and two elective courses.

REQUIRED COURSES (12 crs.)

ISS 515	Information Systems Project Management	3
ISS 550	Database Design	3
ISS 570	Information Analysis	3
MBA 547	Management Information Systems and Applications	3

ELECTIVE COURSES (6 crs.)

Choose two courses from the following depending on student's interests and qualifications.

BSN 510	Economic and Information Systems Environment	4
BSN 511	Business Operations and Analysis	4
BSN 512	Essentials of Accounting and Finance	4
BSN 513	Organizational Behavior and Marketing	4
BSN 514	Strategic Management and Leadership	4
GEO 420	GIS III: Advanced Geographic Information Systems	3
GEO 517	Applied Geographic Information Systems	3
SOC 550	Leadership Theory and Practice	3
SOC 560	Leadership, Change, and Innovation	3

Any 400, 500, or 600 level course in the Computer Science Program (3 or 4 credits each)

MIS LETTER OF COMPLETION

The Management Information Systems Letter of Completion is a 12-credit program with four required courses.

REQUIRED COURSES (12 crs.)

ISS 515	Information Systems Project Management	3
ISS 550	Database Design	3
ISS 570	Information Analysis	3
MBA 547	Management Information Systems and Applications	3

COLLEGE OF EDUCATION AND HUMAN SERVICES

James R. Johnson, Ph.D., Dean, College of Education and Human Services (717) 477-1373

Counseling and College Student Personnel Department

Kurt L. Kraus, Ed.D., *Chair* (717) 477-1668

Clifford W. Brooks Jr., Ed.D.

Kathryn K. Brooks, Ph.D.

Andrew L. Carey, Ph.D.

Marcy J. Douglass, Ph.D.

Rose Merrell-James, Ed.D.

Kathryn Newton, Ph.D.

Matthew R. Shupp, Ed.D.

Todd K. Whitman, Ph.D.

Department Mission and Student Learning Goals

The mission of the Department of Counseling and College Student Personnel, as an entity of Shippensburg University, its Graduate School, and the College of Education and Human Services, is to develop students' academic and personal potential through a comprehensive counselor education program for graduate counseling and college student personnel students and through multi-faceted counseling services for all university students. The department's mission integrates the principles of a meaningful learning environment, professionalism, and individual responsibility. It strives to be a respected leader in the promotion of dignity, acceptance, and collaboration within the Shippensburg University campus environment.

Specifically, it seeks to graduate highly skilled practitioners in counseling and college student personnel by utilizing experiential learning opportunities in an atmosphere of intellectual, investigative, and creative scholarly curiosity. The department nurtures students to become congruent lifelong learners, noble practitioners, and leaders in the profession who embrace scientific inquiry, technology, and innovative practices. Through authentic relationships with invested faculty who model intentional practice based firmly in theory and cultural advocacy, students develop the knowledge and skills necessary to be purposeful, effective practitioners with a strong sense of personal and professional identity.

Goals:

- Students will become professionally oriented and practice ethically.
- Students will become knowledgeable about the cultural context of the practice of counseling and college student personnel and advocate for its inherent value in practice.
- Students will comprehend the importance of theories and models of growth and development across the lifespan in the counseling and college student personnel professions.
- Students will become knowledgeable of the lifelong career development process and its relationship with wellness, identity, and life satisfaction.
- Students will become skilled counselors and college student personnel professionals who counsel, supervise, advocate, consult, collaborate, and coordinate.
- Students will develop theoretical and experiential understandings of group purpose, development, dynamics, counseling theories, and methods and skills pertinent to

facilitating groups (i.e., task/work groups, psycho education groups, and counseling and psychotherapeutic groups).

- Students will become competent in the ethical use of individual, group, and environmental approaches to assessment, measurement, and evaluation.
- Students will understand and apply research methods, quantitative and qualitative analysis, needs assessments, and program evaluations.
- Students will learn how to integrate technology into the professional practices of counseling, supervision, and college student personnel.
- Students will be effective professional communicators.

Accreditation

In addition to the accreditations shared with the university, the College Student Personnel, School Counseling, College Counseling, Mental Health Counseling, and School Counseling programs are approved by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council on Postsecondary Accreditation (COPA). CACREP approval is a professional standards accreditation that validates the quality of education of counseling and related programs. Accreditation in counseling is closely related to the credentialing process established by the National Board for Certified Counselors (NBCC). Upon successful completion of the National Counselor Exam, graduates of CACREP approved programs are eligible to become Nationally Certified Counselors.

Programs Offered

The Department of Counseling and College Student Personnel offers graduate programs leading to the Master of Education degree in counseling with certification as dual (K-12) school counselor, the Master of Science degree with specialization in college counseling or college student personnel, and a sixty-hour Master of Science degree with specialization in clinical mental health counseling.

Admission to Program

All applicants for admission to the Department of Counseling and College Student Personnel program must begin by applying to the Office of Graduate Admissions. The Office of Graduate Admissions will supply the applicant with required departmental application forms.

Admission to the Department of Counseling and College Student Personnel is a process rather than a one-step event. Generally, the admission procedure requires a full academic semester for processing applications, credentials, references, supplemental data form, and the on-campus interview. Students are encouraged to begin this process at least six months prior to the desired starting date. Students must be interviewed and admitted to the counseling department before they will be allowed to enroll in counseling courses.

Applicants for admission to the program must meet the requirements for the specialization and for the Department of Counseling and College Student Personnel in addition to the general requirements for admission to graduate study.

1. Applicants to the School Counseling concentration are expected to have relevant experience working with children (for example, as a teacher, probation officer, child protective services worker, etc.), and a 3.0 GPA in undergraduate degree

work as required by the Pennsylvania Department of Education.

- For the Clinical Mental Health, College Counseling, and the College Student Personnel Programs, a 2.75 undergraduate GPA for admission. If applicants to these programs have less than a 2.75, they must successfully complete the Graduate Record Exam (GRE) or Miller Analogies Test (MAT).

Applicants are required to submit a résumé, three references on department forms, and supplemental data forms. If the applicant meets the initial requirements, the Admission Committee will invite the applicant for a group interview. The applicant will be notified by mail of this decision. The group interview is an opportunity to observe your interpersonal skills.

Students applying to the school counseling program must pass the PAPA (reading, writing, and mathematics) required by the Pennsylvania Department of Education. Successful candidates to the school counseling program will be provisionally accepted until they pass these tests. Provisional acceptance allows students to register for courses, but will only remain valid until the time of candidacy at the end of Phase I. If students have not passed these three tests by the time of candidacy, they will be dismissed from the program.

Because counseling and personnel work include a variety of experiences in practicum, internship, or other clinical experiences, the student's effectiveness and suitability for the program will be subject to an ongoing and broad-based evaluation by faculty and/or field supervisors. Decisions regarding continuance of studies will be predicated on a combination of factors such as demonstrated clinical skills and other relevant professional competencies in addition to grades in coursework.

Under certain conditions, a counseling department committee may ask students to do one or more of the following:

- Interrupt their program for a specified period of time.
- Engage in a therapeutic relationship with a qualified mental health specialist for the purpose of remediation or for the purpose of decreasing behaviors that detract from the ability to provide a constructive helping relationship with others.
- Submit for review additional supportive evidence that demonstrates competence in the skill areas deemed deficient via presentations of skills.
- Limit enrollment to those courses that do not have a significant experiential component for a specified period of time.

Admission to Candidacy

- All students must apply through the department for admission to candidacy. This should be done when the semester CNS585 Practicum is scheduled and in conjunction with advisement.
- The purposes of candidacy are to ensure students are integrating material from the classroom to real-life experiences, to verify professional goals are specific and focused, to determine if students have formulated a realistic view of what they need to do to become effective professionals, and to ensure students can express themselves regarding controversial issues in the field.
- Candidates are evaluated with respect to aptitude, competency, and potential for completing the requirements of their requested program.

- Specific procedures for admission to candidacy are outlined in the Department of Counseling and College Student Personnel's *Student Manual* made available online at www.ship.edu/counsel/.

COUNSELING CERTIFICATION

The Department of Counseling and College Student Personnel offers a graduate program leading to certification in school counseling.

REQUIREMENTS

Completion of the appropriate program in counseling is required for certification. A quality point average of 3.0 must be maintained.

Additionally, a grade of B or better must be earned in the following courses to qualify for continuation in the program and department endorsement for certification.

CNS 578	Pre-practicum in Counseling	3
CNS 585	Practicum in Counseling	3
CNS 580	Clinical Field Experience I	3
CNS 589	Clinical Field Experience II	3

COUNSELING LICENSURE

The Department of Counseling and College Student Personnel offers a sixty-hour graduate curriculum that enables students to become eligible for licensure as a professional counselor in Pennsylvania.

COUNSELING (M.S.)

The Master of Science degree with specialization in counseling has been designed to meet the needs of students whose backgrounds and aspirations vary. Its orientation is toward persons who are preparing for service in areas such as community mental health agencies, hospitals, college counseling centers, and student affairs and higher education. Therefore, completion of the Master of Science degree will not lead to certification as a school counselor. A minimum of 48 to 60 semester hour credits is required for completing the degree. A common core curriculum provides each student with a common base of substantive and experiential knowledge. The remaining credits are taken in an area of emphasis that has been planned with the assistance of an advisor.

Students in this counseling program must select, with departmental approval, an area of emphasis from the following:

- College Counseling** prepares counselors to work in therapeutic settings at colleges, universities, and community colleges.
- College Student Personnel** provides preparation for persons who plan to work as student affairs educators in colleges, universities, or community colleges.
- Clinical Mental Health Counseling** is designed to prepare students to work in therapeutic mental health settings with an emphasis on assessment, diagnosis, and direct counseling services.

COLLEGE COUNSELING CONCENTRATION**REQUIRED COURSES (48 crs.)**

Courses are organized into three phases and should be taken in that order. The sequence within each phase should be followed as closely as possible. Consultation with an advisor on a regular basis is required as a student progresses through the program. Students must apply for admission to candidacy the semester they are enrolled in Practicum.

Phase I (Required by all students)—15 crs.

CNS 559	Introduction to the Helping Services	3
CNS 600	Research and Statistics	3
CNS 515	Career Development	3
CNS 519	Implications for Human Development for Counseling	3
CNS 578	Pre-practicum in Counseling	3

Phase II—27 crs.

CNS 585	Practicum in Counseling	3
CNS 522	Assessment Techniques	3
CNS 509	Multicultural Counseling	3
CNS 573	Theories of Counseling	3
CNS 512	Group Counseling and Leadership Skills	3
CNS 560	Principles of College Student Personnel	3
CNS 565	The College Student and the College Environment	3
CNS 588	Counseling Strategies and Techniques	3
CNS 524	The DSM and Psychopathology for a CNS Perspective	3

Phase III—6 crs

CNS 580	Clinical Field Experience I	3
CNS 589	Clinical Field Experience II	3

Additional classes may be taken with approval of advisor.

Minimum = 48 crs.

COLLEGE STUDENT PERSONNEL CONCENTRATION**REQUIRED COURSES (48 crs.)**

Courses are organized into three phases and should be taken in that order. The sequence within each phase should be followed as closely as possible. Consultation with an advisor on a regular basis is required as a student progresses through the program. Students must apply for admission to candidacy during the semester they are enrolled in Practicum.

While it is possible to complete the program as a part-time student, several of the advanced courses meet in the late afternoon, and most of the practicum and Field Experience sites require the student to be available during the day.

Phase I (Required by all students)—12 crs.

CNS 559	Introduction to the Helping Services	3
CNS 600	Research and Statistics	3
CNS 515	Career Development	3
CNS 578	Pre-practicum in Counseling	3

Phase II—24 crs.

CNS 585	Practicum in Counseling	3
CNS 522	Assessment Techniques	3
CNS 509	Multicultural Counseling	3
CNS 512	Group Counseling and Leadership Skills	3
CNS 560	Principles of College Student Personnel	3
CNS 565	The College Student and the College Environment	3
CNS 587	Research Seminar in Counseling Leadership Elective	3

Phase III—12 crs.

CNS 562	Student Personnel Work in Higher Education	3
CNS 580	Clinical Field Experience I	3
CNS 589	Clinical Field Experience II Elective	3

Minimum = 48 crs.

In addition to the for credit courses, each student majoring in College Student Personnel is required to complete a research project during the program. The proposal for the study is completed during the CNS600 research course that should be taken during the first semester of full-time study. Work on the project will be continued in CNS587, Advanced Research Seminar in Counseling. The completed project must be submitted to the student's advisor one month prior to graduation.

CLINICAL MENTAL HEALTH COUNSELING CONCENTRATION**REQUIRED COURSES (60 crs.)**

Courses are organized into three phases and should be taken in that order. The sequence within each phase should be followed as closely as possible. Consultation with an advisor on a regular basis is required as a student progresses through the program. Students must apply for admission to candidacy the semester they are enrolled in Practicum.

Phase I (Required by all students)—18 crs.

CNS 559	Introduction to the Helping Services	3
CNS 578	Pre-practicum in Counseling	3
CNS 568	Professional Orientation to Mental Health Counseling	3
CNS 573	Theories of Counseling	3
CNS 512	Group Counseling and Leadership Skills	3
CNS 524	The DSM and Psychopathology for a CNS Perspective	3

Phase II—27 crs.**The following courses must be taken prior to enrolling in Clinical Field Experience I:**

CNS 585	Practicum in Counseling	3
CNS 588	Counseling Strategies and Techniques	3
CNS 510	Drug and Alcohol Counseling	3
CNS 508	Marital, Couple, and Family Counseling	3

The following courses must be taken anytime during the program:

CNS 509	Multicultural Counseling	3
CNS 600	Research and Statistics	3
CNS 515	Career Development	3
CNS 519	Implications for Human Development for Counseling	3
CNS 522	Assessment Techniques	3

Electives—6 crs.

Two of the following electives may be taken at anytime during Phase II or III in the program:

CNS 564	Grief and Loss Issues in Counseling	3
CNS 567	Counseling Children	3
CNS 570	Working with Dreams, Sandtrays, and Music in Counseling	3

Phase III—9 crs.

Clinical Field Experiences I and II must be taken sequentially in the Mental Health Counseling concentration.

CNS 580	Clinical Field Experience I	3
CNS 589	Clinical Field Experience II	3
CNS 590	Advanced Clinical Field Experiences	3

Minimum = 60 crs

COUNSELING (M.ED.)

51-60 credit hours is required for completion of the Master of Education degree with specialization in school counseling. However, students who are already Pennsylvania certified teachers maybe exempt from nine credits.

K-12 SCHOOL COUNSELING (M.ED. AND CERTIFICATION)**REQUIRED COURSES (51-60 crs.)**

Courses are organized into three phases and should be taken that order. The sequence with each phase should be adhered to as closely as possible. Consultation with an advisor on a regular basis is required as a student progresses through the program. A student must apply for admission to candidacy during the semester he or she is enrolled in Practicum.

Phase I—27 crs.

CNS 504	Introduction to School Counseling	3
CNS 559	Introduction to the Helping Services	3
CNS 515	Career Development	3
CNS 519	Implications for Human Development for Counseling	3
CNS 578	Pre-practicum in Counseling	3
CNS 600	Research and Statistics	3
EEC 526	Topics in Spec Ed for School Counselors and other School Professionals: Working w/ Stud with Except	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3
RDG 413	Teaching Reading to English Language Learners	3

EEC 526, ELP 516, RDG 413: Students who are already PA-certified teachers and have this coursework completed may be exempt from this course

NOTE: All students MUST complete the three (3 crs.) subtests of the PAPA examination (i.e., reading, math, writing) prior to Candidacy.

Phase II—24 crs.

CNS 585	Practicum in Counseling	3
CNS 573	Theories of Counseling	3
CNS 522	Assessment Techniques	3
CNS 512	Group Counseling and Leadership Skills	3
CNS 509	Multicultural Counseling	3
CNS 505	Organization and Administration of School Counseling Services	3
CNS 588	Counseling Strategies and Techniques	3
CNS 567	Counseling Children	3

CBS 585: mandatory attendance at Practicum/Field Orientation the prior semester and pre-registration

Phase III—6 crs.

CNS 580	Clinical Field Experience I	3
CNS 589	Clinical Field Experience II	3

CNS 580, CNS 589: mandatory attendance at Practicum/Field Orientation the prior semester and pre-registration.

Electives—3 crs.

Choose one from the following:

CNS 508	Marital, Couple, and Family Counseling	3
CNS 510	Drug and Alcohol Counseling	3
CNS 524	The DSM and Psychopathology for a CNS Perspective	3
CNS 564	Grief and Loss Issues in Counseling	3
CNS 570	Working with Dreams, Sandtrays, and Music in Counseling	3

Certification as a School Counselor by the PA Dept. of Education requires successful completion of the School Counseling PRAXIS Exam (#0420). Students should register for and take this test toward the end of their course of study, ideally following CNS 589 and CNS 505.

Please note: Not all courses are offered each semester. Check the master schedule to determine offerings and availability found at <http://www.ship.edu/counsel>.

Minimum = 51-60 hours

SUPERVISOR OF SCHOOL GUIDANCE

For information concerning the post-master's degree program leading to Pennsylvania certification as a supervisor of school guidance services, refer to the Department of Educational Leadership and Special Education (p. 66).

Criminal Justice Department

Melissa L. Ricketts, Ph.D., *Chair*, (717) 477-1156

Michele P. Bratina, Ph.D.

Matthew D. Fetzner, Ph.D.

Billy W. Henson, Ph.D.

Stephanie A. Jirard, J.D.

Cynthia A. Koller, Ph.D.

Carrie Maloney, Ph.D.

E. Britt Patterson, Ph.D.

Laura A. Patterson, Ph.D.

Admission Requirements

Applicants for admission to graduate study with specialization in administration of justice will be expected to have completed an undergraduate program in criminal justice or a closely related allied field. Admission is based on a 2.75 or better undergraduate quality point average or satisfactory scores on the Graduate Record Exam (GRE) or the Miller Analogies Test (MAT).

Mission Statement

The Department of Criminal Justice offers two programs of graduate study, each of which lead to the Master of Science degree in administration of justice. The evening program on campus is designed for both pre- and in-service students pursuing graduate study under a traditional format. The weekend program is designed specifically for juvenile probation officers employed in the Commonwealth of Pennsylvania. A minimum of 36 semester hours of graduate level credits is required to complete each program.

As the systems designed to deliver justice services are continually asked to function effectively in an increasingly complex society, the need for capable criminal justice professionals becomes more and more pressing. The mission of the Department of Criminal Justice graduate programs is to provide current and future criminal justice professionals with the background and skills that will enable them to think critically about the problems of crime and justice and to be effective decision makers in the criminal justice arena. Central to achieving this mission is an integrated program of study designed to provide graduate students with the knowledge and skills to undertake independent, critical investigation of issues related to crime control and justice policy.

The specific objectives of the Department of Criminal Justice's graduate programs are to:

1. Develop an academic environment that will be intellectually challenging and stimulating to both student and faculty.
2. Foster a commitment to pursuing the activities of education, scholarship, and public service in a manner that is consistent with the intellectual traditions of social science inquiry.
3. Provide an intellectual environment that values human diversity and encourages independent and critical thought.
4. Provide an intellectual environment that encourages teaching and scholarship from a diversity of theoretical perspectives and research methodologies.
5. Provide graduate curricula that will provide the knowledge and skills fundamental to criminal justice professionalism.
6. Provide a sound foundation for the pursuit of a doctoral degree in criminal justice.

7. Provide the opportunity for students who are currently criminal justice professionals to extend their knowledge and skills in their area of specialization.
8. Develop professional leadership in the criminal justice field.
9. Introduce students to the research techniques that will enable them to undertake independent research in their areas of specialization and effectively interpret and make use of the research conducted by other professionals.
10. Provide an understanding of the relationship between public policy formulation and criminal justice system behavior.
11. Provide individuals and agencies within the college's service area with needed programs and consultant services appropriate to the resources of the department.

ADMINISTRATION OF JUSTICE (M.S.)

DEGREE REQUIREMENTS

REQUIRED CORE COURSES (24 crs.)

CRJ 501	Foundations of Justice	3
CRJ 520	Justice Administration and Management	3
CRJ 550	Graduate Seminar	3
CRJ 560	Theories of Crime and Delinquency	3
CRJ 590	Justice Policy Analysis	3
CRJ 600	Research Methods	3
CRJ 610	Quantitative Analysis	3
CRJ 635	Restorative Justice	3

CRIMINAL JUSTICE ELECTIVES (12 crs.)

CRJ 570	Legal Trends and Issues	3
CRJ 580	Juvenile Justice System	3
CRJ 585	Treatment and Rehabilitation	3
CRJ 593	Independent Study	3
CRJ 594	Selected Topics in Criminal Justice	3
CRJ 595	Practicum I	3
CRJ 597	Practicum II	3
CRJ 612	Thesis I	3
CRJ 613	Thesis II	3
CRJ 617	Internship I	3
CRJ 618	Internship II	3

INTERDISCIPLINARY COURSES (3-9 crs.)

With Department of Criminal Justice approval, and providing the student meets the requirements of the department offering the course, courses numbered 500 and above can be taken from one or more of the following: Counseling and College Student Personnel, Educational Leadership and Special Education, Government/Public Administration, History, and Psychology. These may be substituted for Criminal Justice electives up to a maximum of nine (9) credits.

Educational Leadership and Special Education Department

Christopher L. Schwilk, Ph.D., *Chair* (717) 477-1591
 David F. Bateman, Ph.D.
 Kelly M. Carrero, Ph.D.
 William K. Cowden, Ed.D.
 Phillip F. Diller, Ed.D.
 Corinne E. Eisenhart, Ph.D.
 Gerald L. Fowler, Ph.D.
 Thomas C. Gibbon, Ed.D.
 Calli G. Lewis, Ph.D.
 Cheryl H. Zaccagnini, Ed.D.

Programs Offered

The Department of Educational Leadership and Special Education offers graduate programs leading to the Master of Education degree in educational leadership and to the Master of Education in Special Education.

The master's degree programs in educational leadership include programs leading to certification of K-12 principals and post-master's degree programs leading to the certification of K-12 principals.

The department also offers post-master's degree programs leading to the Supervisory I Certificate in twelve fields of specialization and a post-master's degree program leading to the Superintendent's Letter of Eligibility.

The master's in Special Education programs lead to Pennsylvania certification in special education at the PreK-8 and 7-12 levels. Additionally, the department offers master's degree programs leading to advanced study in learning disabilities, behavioral disorders, and intellectual disabilities.

Students matriculating for a degree and/or certification in educational leadership or special education at Shippensburg University shall be given preference for class seats over students not enrolled in a graduate program in educational leadership or special education when the demand for a particular class exceeds the class enrollment.

Students may take courses as non-degree graduate students, but candidates should not take more than nine credit hours before being accepted for admission into one of the department's programs.

Students in educational leadership programs are required to take courses in a specified sequence. Program plans are designed for each student by department faculty as part of the admissions process.

Students in special education are not required to take courses in a particular order except for practicum and student teaching, which are to be taken after other coursework is completed.

In the Educational Leadership and Special Education programs, each student's effectiveness and suitability for recommendation to PDE for school service will be given a broad-based evaluation by faculty and/or field experience supervisors. In addition to grades, final decisions regarding continuance in the program will be predicated on a combination of factors such as demonstrated clinical competence, personal interaction skills, judgment, and other relevant issues related to professionalism. The department

reserves the right to discontinue students who in the opinion of the majority of the program faculty do not possess the dispositions or competence for certification.

Admission Requirements for Educational Leadership Programs

In addition to the regular requirements for admission to graduate study, the applicant for admission to the graduate program in educational leadership must have an Instructional or Educational Specialist certificate. The applicant must obtain an application and two reference forms from the Department of Educational Leadership and Special Education. One recommendation must be completed by a chief school officer (district superintendent or intermediate unit executive director) in the school in which the candidate is currently employed or has been most recently employed. The second reference must be either from a principal or the applicant's immediate supervisor. In addition, a signed copy of the Memorandum of Understanding for Practicum and Mentoring must be signed by the chief school officer and submitted with the application.

After the review of the applicant's credentials and supporting materials, a decision on admission to graduate study will be made by the Educational Leadership faculty and/or the Department Chair. Admission to graduate study does not guarantee subsequent admission to candidacy for the master's degree.

In order to complete a program of study leading to the Master of Education degree, the student must apply for and be admitted to candidacy for the degree.

1. The student shall file an official application for admission to candidacy with the Department of Educational Leadership and Special Education upon the completion of at least 6 and not more than 12 credits of graduate work at this institution.
2. The applicant shall have completed at least two years of successful teaching experience in elementary, middle, or secondary schools, or have had other professional experience in education.
3. The applicant shall have maintained a quality point average of not less than 3.0 (equivalent to an average of B with no more than one C) in the completed graduate courses.
4. Recommendation for admission to candidacy for the master's degree will be determined by department faculty, following an interview by a committee of faculty members and may include mentors or other supervisors from the candidate's school district. Judgments will involve consideration of the academic record, interview interaction, written exercise, and letters of recommendation.

SCHOOL ADMINISTRATION (M.ED. INCLUDES PRINCIPAL CERTIFICATION)

This program course of study is organized into three tiers. Tier 1 courses represent work appropriate for the beginning or introductory phase of a student's program. Tier 2 includes courses that are appropriate for students who are midway in their programs. Tier 3 courses are for advanced work and come with the expectation that students have a strong background from Tier 1 and Tier 2 work in order to be successful.

Courses do not follow a strict prerequisite model but must be scheduled using Approved Individual Student Program Plans as follows:

- Beginning Level (Tier 1) students should schedule Tier 1 courses but may elect a Tier 2 course if no Tier 1 courses are available. Tier 1 students are not eligible to take Tier 3 courses.
- Tier 2 Level students may schedule courses from Tier 1 and Tier 3.
- Tier 3 Level students may schedule courses from all Levels.

A student is considered a Tier 1 Level student when he/she enters the program. A student advances to the subsequent Tier when he/she completes all of the required courses in the preceding Tier. Tier 1 students, who, because of scheduling difficulty need to select a course from Tier 2, must seek advice from their advisors.

Minimum 33 semester hour credits required for a Master's Degree.

REQUIREMENTS

Required Educational Leadership Core Courses

Tier 1

ELP 515	The Role of Research and Data Informed Decision-Making for School Leaders	3
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Tier 2

ELP 517	Leadership in Technology and Effective Program Delivery	3
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Tier 3

ELP 569	Seminar: Diversity in Education	3
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Required Pennsylvania Inspired Leadership Core Courses

Tier 1

ELP 514	Practicum I Leadership Field Experiences at the Building Level	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3

Tier 2

ELP 518	The Role of Supervision in Promoting Student Achievement	3
ELP 519	Advanced Leadership and the School Principal PK-12	3

Tier 3

ELP 520	School Finance and Student Learning	3
ELP 521	Legal and Ethical Issues that Impact on Student Learning	3
ELP 522	Practicum II Advanced Leadership Field Experiences at the Building Level	3

Electives (3 crs.)

Tier 1

ELP 500	General School Administration	3
PSY 527	Studies in the Psychology of Adolescence	3
TCH 575	Advanced Child Development	3

Advisor Pre-Approved ELP 600 Level Courses

Tier 2

ELP 490	Selected Topics in Educational Leadership and Policy	1-3
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Advisor Pre-Approved ELP 600 Level Courses

Tier 3

The master of education degree program requires 33 total credit hours, which includes 440 hours of school-based apprenticeship and internship practicum. The student must advance to candidacy upon completion of 6 and not more than 12 semester hour credits of graduate work at Shippensburg University.

ELP 510	Special Education Law	3
ELP 580	Statistical Methods in Education	3
ELP 620	Thesis	3

Advisor Pre-Approved ELP 600 Level Courses

The master of education degree program requires 33 total credit hours, which includes 440 apprenticeship hours. Student must advance to candidacy upon completion of 6 and not more than 12 semester hour credits of graduate work at Shippensburg University.

Principal Certification Programs

POST-MASTER'S DEGREE CURRICULA LEADING TO CERTIFICATION OF K-12 PRINCIPALS

Students who have earned an M.Ed. in educational leadership and need only K-12 Principal Certification may apply to the Dean of Admissions for the Post-master's K-12 Principal Certification Program.

1. The applicant shall present a copy of the applicant's teaching certificate and evidence of three years of successful teaching experience in elementary, middle, or secondary schools.
2. Applicants who did not complete the master of education degree in educational leadership at Shippensburg University shall also provide official transcripts sent to the Dean of Admissions by any institution at which the applicant has taken undergraduate or graduate work. Applicants must obtain two reference forms from the Department of Educational Leadership and Special Education. These forms are available at http://www.ship.edu/ELSE/Educational_Leadership/Forms/. One recommendation must be completed by a chief school officer (district superintendent or intermediate unit executive director) in the school or intermediate unit in which the candidate is currently employed or has been most recently employed. The second reference must be either from the applicant's principal or immediate supervisor.
3. Applicants must submit a completed Apprenticeship Application and Practicum Memorandum of Understanding between their school district and the educational leadership program.
4. Recommendation for admission to the certification program will be determined by the faculty in the Department of Educational Leadership and Special Education.

Policies for the Certification Program

1. A minimum of five years of professional school experience is required for the Administrative I certificate.
2. A B average must be maintained for the credits required for certification, with not more than one C grade included.
3. Courses or prescribed experiences may be repeated only with the approval of the student's advisor, the chair of the Department of Educational Leadership and Special Education, and the dean of the College of Education and Human Services.
4. Prescribed experiences for the certification program must be completed within a three-year period. This requirement will apply unless an extension is granted for extenuating circumstances by the department and the dean.
5. Individuals pursuing principal certification who have not gone through a candidacy review for the master's degree with the Department of Educational Leadership and Special Education at Shippensburg University may be required to complete an interview. If required, this review must be conducted after completion of six to nine hours of coursework.
6. It is essential the student work closely with his or her advisor throughout the program. A student is required to complete 15 credit hours at Shippensburg University in order for the department to recommend him/her for certification.
7. The practicum experiences will be individually prescribed programs based upon Pennsylvania Department of Education mandated competencies and the experiences of the candidate. Arrangements for practicum should be made one year in advance.
8. Pennsylvania Department of Education requires a passing score on the Pennsylvania Department of Education School Leader Licensure Assessment. Go to <https://www.ets.org/praxis/pa/requirements> for more information.

POST-MASTER'S DEGREE CERTIFICATION PROGRAM FOR SCHOOL PRINCIPALS

A minimum of 15 semester hour credits is required as outlined below. A candidate who has completed a master's degree other than the Master of Education degree in educational leadership at Shippensburg University will not be required to complete a second master's degree; however, his or her program may need to include additional courses identified as necessary to attain the required competencies.

The program coursework is organized into three tiers. Tier 1 represents work appropriate for the beginning or introductory phase of a student's program. Tier 2 indicates courses that are appropriate for students who are midway in their programs. Tier 3 courses are for more advanced work and come with the expectation that students have a strong background from Tier 1 and Tier 2 work in order to be successful.

Courses do not follow a strict prerequisite model but must be scheduled using Approved Individual Student Program Plans as follows:

- Beginning Level (Tier 1) students should schedule Tier 1 courses but may elect a Tier 2 course if no Tier 1 courses are available. Tier 1 students are not eligible to take Tier 3 courses.
- Tier 2 Level students may schedule courses from Tier 1 and Tier 3.
- Tier 3 Level students may schedule courses from all levels.

A student is considered a Tier 1 Level student when he/she enters the program. A student advances to the subsequent Tier when he/she completes all of the required courses in the preceding Tier. Tier 1 students who, because of scheduling difficulty need to select a course from Tier 2, must seek advice from their advisors.

REQUIREMENTS

Required Pennsylvania Inspired Leadership Core Courses

Tier 1

ELP 514	Practicum I Leadership Field Experiences at the Building Level	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3

Tier 2

ELP 518	The Role of Supervision in Promoting Student Achievement	3
ELP 519	Advanced Leadership and the School Principal PK-12	3

Tier 3

ELP 520	School Finance and Student Learning	3
ELP 521	Legal and Ethical Issues that Impact on Student Learning	3
ELP 522	Practicum II Advanced Leadership Field Experiences at the Building Level	3

SUPERINTENDENT'S LETTER OF ELIGIBILITY PROGRAM

The Superintendent's Letter of Eligibility enables the holder, when requested by a district's board of education, to be commissioned by the Commonwealth of Pennsylvania to serve in the following positions: district superintendent, assistant district superintendent, intermediate unit executive director, intermediate unit assistant executive director. Other positions are also authorized under the Superintendent's Letter of Eligibility. Students should consult the Pennsylvania Department of Education for further information.

The program of studies completely satisfies all standards of the Commonwealth and provides the student with the knowledge, competencies, and skills needed to function in roles requiring this certification.

Individuals desiring to pursue this certification will, in all probability, have had considerable graduate coursework in educational leadership and/or related fields and more than likely hold certification as a principal or supervisor. Such graduate coursework and credit hours shall be considered and credited if applicable toward the requirements for this certification.

The Superintendent's Letter of Eligibility can be obtained at Shippensburg University by enrolling in a field-based program of study, the Leadership Residency Program.

Leadership Residency Program

The Leadership Residency Program at Shippensburg University includes a series of six field residencies leading to the Superintendent's Letter of Eligibility, or in the case of alternative pathway students, eligibility for a commission as a superintendent/assistant superintendent. Each residency is 4 credits. These residencies are spread over an 18-month field based program in the candidate's school district of origin or in a district that has agreed to accept a residency candidate. Residencies are organized around six critical leadership content areas spread over six semesters.

- Strategic Leadership in District Governance and Community Relations
- Ethical and Legal Decision-Making at the District Level
- Negotiations and Personnel Strategic Decision Making
- Optimizing Financial Resources to Support District Level Achievement
- Instructional and Technology Leadership at the Executive Level
- The Impact of Facilities and Plant Management Decisions on School Effectiveness

As part of each residency a series of intensive seminars are included at selected sites throughout the region. These seminars are conducted by Leadership Fellows (invited experts currently practicing in the field), University Supervisors, and invited experts in the field.

The Residency Program is designed to meet the needs of school leaders who want a field-based experience as they pursue a study of district leadership. This program, approved by the Pennsylvania Department of Education, is based on twenty-first century leadership that will enable students to work with regional district leaders and content experts as they are guided and supported by university supervisors.

Requirements for Admission

Applicants must:

1. File an application with the dean of Graduate Admissions for admission to the Residency Program.
2. Attend the Leadership Residency Program orientation.
3. Hold a master of education degree.
4. Currently hold a Pennsylvania administrative and/or supervisory certificate.
5. Currently serve in a certified administrative/supervisory position.
6. Complete the Leadership Residency Application and Practicum Memorandum of Understanding between their school district and the educational leadership program.
7. Have an official transcript sent to the dean of Graduate Admissions from any institution at which the applicant has taken undergraduate and graduate work.
8. Take a minimum of fifteen (15) credit hours within the Department of Educational Leadership and Special Education at Shippensburg University.
9. Submit two references: One completed by a chief school officer (district superintendent or intermediate unit executive

director) in the school in which the candidate is currently employed or has been most recently employed; and one by another school administrator. Obtain forms at www.ship.edu/ELSE/Educational_Leadership/Forms/.

10. Possess a GPA of at least a 3.0 in all graduate work taken prior to application to this program.

Applicants who have satisfied their master's degree and certification requirements at another college or university or earned their advanced degree outside the field of educational leadership at Shippensburg University may be required to successfully complete an oral review conducted by the faculty of the Department of Educational Leadership and Special Education. This review will be conducted after the applicant has taken six (6) hours of graduate work within the department.

Final recommendation for admission to this certification program will be determined by the faculty of the Department of Educational Leadership and Special Education.

Policies for Completing the Superintendent's Letter of Eligibility Program

1. Minimum of six years of professionally certificated services in the basic schools, three years of which were in supervisory or administrative positions.
2. Maintain at least a B average in all coursework, with not more than one C grade included in this average. Obtaining a second grade of C will cause the student to be dismissed from the university.
3. Enroll for a minimum of six graduate credit hours per year.
4. Work closely with advisor.
5. Each student, in addition to completing the course requirements specified on his or her individual program of studies, must demonstrate, through appropriate practicum activities, field experiences, and a written/oral competency exam (exit interview), they have acquired the knowledge, skills, and competencies to render effective leadership in schools and educational institutions. The student's leadership, scholarship, and interpersonal skills shall be monitored most carefully throughout his/her program of studies and during his/her practicum and field experiences.
6. Satisfy all final evaluation policies and procedures established by the Department of Educational Leadership and Special Education for students in the Letter of Eligibility program.

Student Advisement of the Superintendent's Letter of Eligibility Program

1. The Department of Educational Leadership and Special Education assigns a faculty advisor for each applicant.
2. The faculty advisor is responsible to promptly meet with the applicant and review the applicant's academic records, degrees, and certification held along with past and present professional experiences. After consulting with the applicant, the advisor shall construct an individualized program of study for each applicant designed to meet the professional needs of the applicant as well as satisfying the requirements for certification by the Pennsylvania Department of Education and the Department of Educational Leadership and Special Education.
3. Faculty advisor shall apprise the applicant of all policies, regulations, and procedures relating to the Letter of Eligibility Program and take the necessary steps to see the applicant fully understands such.

4. It shall be the joint responsibility of the student and the advisor to consult with one another on a regular basis while the student is enrolled in the Residency Leadership Program.
5. The student should seek the advice and counsel of his/her faculty advisor when the need arises. The faculty advisor is the contact person for any questions or concerns the student may have relating to his/her graduate program at Shippensburg University.
6. The faculty advisor shall be invited to be a member of an oral review panel at the completion of the program.
7. The faculty advisor shall continually review his/her advisee's progress, academic work, and general overall standing and report any concerns to both the student and the Educational Leadership and Special Education Department.
8. The faculty advisor shall be responsible for scheduling a final exit review to ascertain the student has met all the requirements prior to recommending this student for certification.
9. The faculty of the Department of Educational Leadership and Special Education shall review all students' academic records prior to recommending a student to the Pennsylvania Department of Education for the Superintendent's Certification.

Program of Studies for the Superintendent's Letter of Eligibility Program

An individualized program of studies shall be constructed for each student that addresses the standards for this certification.

Depending upon student's prior coursework, prerequisite coursework may be required in addition to the program of studies described below.

The coursework is organized into three tiers. Tier 1 represents work appropriate for the beginning or introductory phase of a student's program. Tier 2 indicates courses that are appropriate for students who are midway in their programs. Tier 3 courses are for more advanced work and come with the expectation that students have a strong background from Tier 1 and Tier 2 work in order to be successful.

Courses do not follow a strict prerequisite model but must be scheduled using Approved Individual Student Program Plans as follows:

- Beginning Level (Tier 1) students should schedule Tier 1 courses but if none are available, may elect a Tier 2 course. Tier 1 students are not eligible to take Tier 3 courses.
- Tier 2 Level students may schedule courses from Tier 1 and Tier 3.
- Tier 3 Level students may schedule courses from all levels.

A student is considered a Tier 1 Level student when he/she enters the program. A student advances to the subsequent Tier when he/she completes all of the required courses in the preceding Tier. Tier 1 students who, because of scheduling difficulty need to select a course from Tier 2, must seek advice from their advisors.

REQUIREMENTS

Required Prerequisite Courses

Tier 1

ELP 515	The Role of Research and Data Informed Decision-Making for School Leaders	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3

Required Pennsylvania Inspired Leadership Courses

Tier 1

ELP 621	Practicum I Strategic Leadership in District Governance	3
ELP 622	The Superintendent as a School and Community Leader	3

Tier 2

ELP 623	Negotiations and Personnel Strategic Decision Making	3
ELP 624	Ethical and Legal Decision-making at the District Level	3

Tier 3

ELP 625	The Impact of Facilities and Plant Management Decisions on School Effectiveness	3
ELP 626	Optimizing Financial Resources to Support District Level Achievement	3
ELP 627	Practicum II Strategic Instructional Leadership	3

A minimum of 15 semester hour credits must be completed at Shippensburg University. Also, upon completion of the program, students must meet the six years of qualified educational experiences of which three must be in administrative position(s) as part of the requirement to receive the Superintendent's Letter from the Pennsylvania Department of Education.

A minimum of 15 semester hour credits must be completed at Shippensburg University. Also, upon completion of the program, students must meet the six years of qualified educational experiences of which three must be in administrative position(s) as part of the requirement to receive the Superintendent's Letter from the Pennsylvania Department of Education.

SUPERVISORY I CERTIFICATION

Post-master's degree programs leading to the Supervisory I Certificate issued by the Pennsylvania Department of Education are offered in the following fields:

Communication/English
Counseling
Early Childhood Education
Elementary Education
Environmental Education
Foreign Languages
Mathematics
Pupil Services
Reading
Science
Social Studies
Special Education

Requirements vary according to specialty area, with a minimum of 15 credits required. All work must be completed within a five-year period. To be recommended for the supervisory certificate, candidates must obtain a minimum quality point average equivalent to a grade of B with no more than one C grade. A second C grade will cause the student to be dismissed from the university.

Requirements for Admission to the Supervisory Program

1. An earned master's degree with at least 15 graduate credit hours in subject field or educational specialist area.
2. Two references: One completed by a chief school officer (district superintendent or intermediate unit executive director) in the school in which the candidate is currently employed or has been most recently employed; and one from a principal or immediate supervisor. Obtain forms at www.ship.edu/ELSE/Educational_Leadership/Forms/.
3. Submit a completed Apprenticeship Application and Practicum Memorandum of Understanding between their school district and the program.
4. School of Graduate Studies approval. The admission letter will outline each student's program, including any additional requirements needed.

Supervisory I Certificate Requirements

The candidate shall:

1. Take six to nine graduate credit hours in the field of supervision to qualify for a practicum experience. (Enrollment in a minimum of 15 credit hours is required at Shippensburg University for the student to be recommended for certification.)
2. Complete the appropriate curriculum outlined in the letter of admission.
3. Present a copy of an Instructional II or Educational Specialist II certificate in the subject area in which the supervisory certificate is desired.
4. Complete a recent graduate research course in the appropriate field or show evidence of having completed comparable applied research in the field.

5. Complete five years of successful professional experience in the supervisory area desired prior to being recommended for certification.
6. Pennsylvania Department of Education requires a passing score on Praxis: Educational Leadership, Administration, and Supervision.

CURRICULA LEADING TO SUPERVISORY I CERTIFICATION

Each candidate, in addition to completing the course requirements specified for the specialty area, must demonstrate, through appropriate practicum activities, the identified competencies have been attained.

Counseling/Pupil Services

Applicants for admission to the graduate program for counselor supervisors must hold a valid elementary or secondary school guidance counselor certificate, or present evidence of having had at least three years of counseling experience in the public schools, and be recommended as having potential as a supervisor of school counseling services. Applicants who have not completed appropriate supervised practicum courses must do so before admission is granted.

To be recommended for certification as a supervisor of school counseling services, a candidate must complete the approved program outlined below and present evidence of having had at least five years of full-time experience as a counselor in the public schools.

Courses

CNS 505	Organization and Administration of School Counseling Services	3
CNS 512	Group Counseling and Leadership Skills	3
CNS 581	Counselor Supervision	3
ELP 500	General School Administration	3
ELP 514	Practicum I Leadership Field Experiences at the Building Level	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3
ELP 518	The Role of Supervision in Promoting Student Achievement	3
ELP 521	Legal and Ethical Issues that Impact on Student Learning	3
ELP 517	Leadership in Technology and Effective Program Delivery	3
	OR	
ELP 520	School Finance and Student Learning	3
ELP 619	Leadership for Pupil Services	3

Communication/English, Early Childhood Education, Elementary Education, Environmental Education, Foreign Languages, Mathematics, Pupil Services, Reading, Science, Social Studies, and Special Education

ELP 500	General School Administration	3
ELP 510	Special Education Law	3
ELP 514	Practicum I Leadership Field Experiences at the Building Level	3
ELP 516	Curriculum Assessment and Instructional PK-12 for Diverse Student Populations	3
ELP 518	The Role of Supervision in Promoting Student Achievement	3
ELP 521	Legal and Ethical Issues that Impact on Student Learning	3
ELP 517	Leadership in Technology and Effective Program Delivery	3
	OR	
ELP 520	School Finance and Student Learning	3

SPECIAL EDUCATION (M.ED.)

Shippensburg University's special education program is working to meet the needs of a changing society. The program is designed to conform to the Special Education Standards of the Pennsylvania Department of Education, and to the standards and regulations for graduate education at Shippensburg University, National Council for Accreditation of Teacher Education (NCATE), and the Council for Exceptional Children (CEC).

The purpose of the program is to equip special education teachers with the knowledge and skills needed to instruct students from several categorical areas (learning disabilities, intellectual disabilities, physical disabilities, and behavior disorders). Participants completing the program of study will possess the necessary skills to provide instruction to students with disabilities in the least restrictive environment. Students' learning will reflect historical and contemporary knowledge, research, theory, experience, and practice meeting the academic, personal, and social needs of their unique clientele. Specifically, students will be equipped with knowledge about (1) characteristics of children and adolescents with mild/moderate/severe learning disabilities, intellectual disabilities/autism, and emotional/behavior disorders, and (2) methods and strategies appropriate for instruction in the least restrictive environment regardless of the exceptionality category.

THE PROGRAMS

The Master of Education (M.Ed.) in Special Education has four tracks. One can earn comprehensive certification in special education while earning the master of education degree. Alternatively, someone holding special education certification or other educational certifications can pursue work in the specialty areas of behavior disabilities, learning disabilities, or intellectual disabilities without certification. The department offers the following graduate degree specializations in special education:

- M.Ed. in Special Education with Comprehensive Certification (PK-8 and/or 7-12)
- M.Ed. in Special Education with an Emphasis in Behavioral Disabilities

- M.Ed. in Special Education with an Emphasis in Learning Disabilities
- M.Ed. in Special Education with an Emphasis in Mental Retardation/Developmental Disabilities

Master's Degree with Special Ed Certification

The master's degree with certification requires a minimum of 33 credit hours of coursework plus 9 credit hours of student teaching. It is designed for individuals who already hold either a Pennsylvania elementary (K-6, PreK-4) middle (4-8), secondary (7-12), or reading specialist (K-12) teaching certification. Applicants interested in special education certification must present transcripts that demonstrate that the following courses or their equivalents have been taken at an undergraduate or graduate level:

- Introduction to Exceptionalities: (EEC273 Introduction to Exceptionalities)
- Inclusion of Students with Disabilities: (EEC423 Effective Instructional Strategies for Children with Exceptionalities)
- Assessment of Students with Disabilities: (EEC483 Assessing Children With Exceptionalities for Curricular Decision-Making)
- English Language Learners (ELL): (RDG413 Teaching Reading to English Language Learners)

If the applicant's transcript does not show evidence of having taken these or comparable courses, the courses will be treated as a deficiency (i.e., required background course that must be taken before receiving full admission to the program). Additionally, applicants for the program must hold a current Pennsylvania teaching certificate prior to applying for the special education certification. Applicants from other states must obtain a Pennsylvania certificate prior to applying for special education certification from PDE. The following certifications are approved as prerequisite teaching credentials for the special education certificates:

- Early Childhood (PK-4)
- Elementary (K-6)
- Secondary (7-12)
- Middle Level (4-8)
- Reading Specialist (K-12)

Candidates who apply for the master's degree with special education certification program who do not hold educational certification in another field must complete significant additional requirements to meet the above requirements. Those requirements are determined after a review of their official transcripts.

Applicants are required to participate in an interview with a faculty member and to present evidence of previous successful experience in working with children and display a commitment to teaching students with disabilities.

A maximum of 9 credits in special education may be accepted when non-matriculated students make application to the special education program. Each student is required to have a program-planning sheet approved by their advisor. A candidate is required to obtain a minimum grade of B in each course. Courses with a grade less than B must be repeated. A grade of F in any course will automatically cause dismissal from the program.

The program of study appropriate for the individual's professional goals will be developed during the applicant's admission interview from the following course organizations.

REQUIREMENTS

The program of study appropriate for the individual's professional goals will be developed from the following course organizations:

M.Ed. — Certification

Prerequisites (Introduction to Exceptionalities, Assessment, Inclusion and English Language Learners) must be taken if transcripts do not show evidence of prior completion.

EEC 535	Special Education Processes in a Standards Aligned System	3
EEC 545	Applied Behavior Analysis/Positive Behavior Supports	3
EEC 548	Direct Instruction	3
EEC 550	Instruction for Students with High Incidence Disabilities	3
EEC 551	Subject Area Content Access for Students with Learning Disabilities in a Standards Aligned System	3
EEC 561	Instruction for Students with Low Incidence Disabilities	3
EEC 565	Instruction for Students with Autism Spectrum Disorders	3
EEC 571	Instruction for Students with Social, Emotional, and Behavior Disorders	3
EEC 600	Research in Special Education	3
EDU 495	Student Teaching and Professional Practicum	9-15

Grades 7-12 Certification

EEC 546	Transition to Adult Life for Students with Disabilities	3
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Total hours Comprehensive Certification: 39

If the applicant does not hold an education certificate, a program of background courses as prescribed by the chair of the Department of Educational Leadership and Special Education must be completed. This program will include a sixteen-week student teaching experience.

M.Ed. — Learning Disabilities (Post or non-certificate study)

Prerequisites (Introduction to Exceptionalities, Assessment, Inclusion, and English Language Learners) must be taken if transcripts do not show evidence of prior completion.

EEC 535	Special Education Processes in a Standards Aligned System	3
EEC 545	Applied Behavior Analysis/Positive Behavior Supports	3
EEC 548	Direct Instruction	3
EEC 550	Instruction for Students with High Incidence Disabilities	3
EEC 551	Subject Area Content Access for Students with Learning Disabilities in a Standards Aligned System	3
ELP 510	Special Education Law	3

EEC 590	Practicum I in Special Education	3
EEC 600	Research in Special Education	3
	Electives (9)	

Program total is a minimum of 33 credits. Electives chosen based on advisement.

M.Ed. — Mental Retardation/Developmental Disabilities

Prerequisites (Introduction to Exceptionalities, Assessment, Inclusion, and English Language Learners) must be taken if transcripts do not show evidence of prior completion.

EEC 535	Special Education Processes in a Standards Aligned System	3
EEC 545	Applied Behavior Analysis/Positive Behavior Supports	3
EEC 548	Direct Instruction	3
EEC 561	Instruction for Students with Low Incidence Disabilities	3
ELP 510	Special Education Law	3
EEC 590	Practicum I in Special Education	3
EEC 600	Research in Special Education	3
	Electives (12 credits)	12

Program total is a minimum of 33 credits. Electives chosen based on advisement.

M.Ed. — Behavioral Disorders

Prerequisites (Introduction to Exceptionalities, Assessment, Inclusion, and English Language Learners) must be taken if transcripts do not show evidence of prior completion.

EEC 535	Special Education Processes in a Standards Aligned System	3
EEC 545	Applied Behavior Analysis/Positive Behavior Supports	3
EEC 548	Direct Instruction	3
ELP 510	Special Education Law	3
EEC 565	Instruction for Students with Autism Spectrum Disorders	3
EEC 571	Instruction for Students with Social, Emotional, and Behavior Disorders	3
EEC 590	Practicum I in Special Education	3
EEC 600	Research in Special Education	3
	Electives (9)	

Program total is a minimum of 33 credits. Electives chosen based on advisement.

SPECIAL EDUCATION SUPERVISOR

For information concerning the post-master's program leading to Pennsylvania certification as a Special Education Supervisor, refer to Supervisory Certification Programs (p. 71).

Social Work and Gerontology Department

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 Sam Benbow, Ed.D.
 Dara Bourassa, Ph.D.
 Jennifer Clements, Ph.D.
 Elizabeth A. Fisher, Ph.D.
 Marita Flagler, Ph.D.
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 Charlene Lane, D.S.W.,
 Michael J. Lyman, Ph.D.
 Dorlisa Minnick, Ph.D.

SOCIAL WORK (MSW)

Collaboration

Shippensburg University jointly offers with Millersville University a Master of Social Work (MSW) degree program. An MSW permits graduates to work in a variety of human service programs and agencies in an advanced clinical and/or administrative capacity. The flexibility of the social work degree provides graduates with many options as they pursue their careers in helping fields.

Mission

The mission of the MU-SU MSW program is to provide accessible social work graduate education in the south-central region of Pennsylvania in order to prepare students for advanced generalist practice and to provide professional leadership and contribute to the development and dissemination of social work practice knowledge.

Program Goals

The MU-SU MSW program seeks to:

1. Prepare students for competent advanced generalist practice, with a focus on rural client systems, through the acquisition and demonstration of social work knowledge, skills, and values.
2. Provide leadership and service for the social welfare systems and the social work profession.
3. Foster commitment to professional development and the creation and dissemination of knowledge.

Program Structure

The program is designed for students who have no previous social work education and for those who want to build upon their baccalaureate social work education. Students will be admitted full or part time. Courses are offered evenings with some Saturday classes, which are electives. State-of-the-art technology will permit students to acquire social work knowledge, skills, and values through multiple educational methods, including teleconferencing and web-based activities. Students will take all courses on the campus where they are enrolled, while benefiting from the quality faculty and resources of both universities.

Accreditation

The MU-SU MSW program is fully accredited by the Council on Social Work Education (CSWE).

Admissions Classifications

Students may apply for regular or advanced standing admission. Regular standing admission is for students who completed a baccalaureate degree with a major from other than a CSWE-accredited social work program and for students who did graduate from a CSWE-accredited social work program within the past eight years but did not meet the QPA requirements for advanced standing. Students may apply for advanced standing admission if they graduated from a CSWE-accredited social work program within the past eight years and do meet the QPA requirements as described in the admission guidelines.

Admission Guidelines

Campus

Candidates may choose to apply through either Millersville or Shippensburg University. If all seats are full at one campus, successful applicants will be given the option to enroll through the other campus, if seats are available. Applicants desiring admission to a specific campus may also be placed on a waiting list if all seats are full.

QPA

Applicants for Regular Standing admission must have a minimum cumulative quality point average of 2.8 on a 4.0 scale from a regionally accredited undergraduate institution. In exceptional cases, applicants who lack the required quality point average but whose other qualifications are outstanding may be admitted on a probationary basis. Applicants admitted on probation must earn a 3.0 quality point average by the end of the first 12 credits.

Applicants for Advanced Standing admission must have earned a baccalaureate degree in the last eight years from a CSWE-accredited social work program with an overall QPA of 3.0 in all undergraduate coursework and a major QPA of 3.25 or higher on a 4.0 scale.

Exemption from Foundation (First-Year) Courses

Students who graduated with a baccalaureate degree from a CSWE-accredited social work program who are not eligible for advanced standing may be eligible for exemptions from first-year foundation courses other than practice and field instruction in which they have earned a grade of B or higher within the past eight years. Exemptions will reduce the total number of credits a student must earn to graduate. The Admissions Committee will send a letter notifying the applicant of the exemptions.

Waivers

Students may apply for waivers from courses when they have already demonstrated proficiency in the course content at a graduate level with a grade of a B or higher. When requesting consideration for a waiver, a student must submit a Request for Waiver form and course syllabi to the program co-director. A waiver will not reduce the number of required credits for graduation but will allow a student to take a more advanced course or an elective course.

Entrance Examination

Only applicants whose QPA falls below the minimum standard of 2.8 need to take either the Miller Analogies Test (MAT) or the General Graduate Record Exam (GRE) as part of the

admission process. Scores should not be more than five years old at the time of application.

Personal Qualifications

Applicants must evidence a combination of professional and personal experiences, qualities, and values that are considered essential for the practice of social work. A current resume is required. Three professional references are required with a minimum of one from faculty and one from a current or recent agency employer or supervisor. Applicants will complete a written personal statement. Forms are available through the Graduate Admissions Office. The program may request a personal interview or additional information when necessary to make a fully informed admissions decision.

Persons who have criminal records are not eligible to work in many human service fields. Applicants with criminal records should contact the M.S.W. program director for additional information.

Prerequisites

Students must demonstrate they have successfully completed coursework in each of the following areas: Human Biology, Economics, Government/Political Science, Psychology, Sociology/Anthropology, and Statistics. Applicants can be admitted with up to two course deficiencies. These course deficiencies must be completed by the end of the foundation year (30 credits) of the M.S.W. program.

Transfers

Students may receive up to nine (9) credit hours earned at other regionally accredited institutions prior to admission. Graduate credits earned more than five years prior to admission do not qualify for transfer. Students may only transfer credits provided they are in good standing in those schools. Courses must be listed on an official transcript with a B or higher. Condensed one-week graduate courses do not qualify for transfer.

With advance permission of MU-SU M.S.W. program director and the faculty advisor and as part of a planned program, a student may transfer credits from other graduate programs at MU or SU.

Experience

The program does not grant academic credit for life or work experience.

Evaluation of Students

A formal Admission to Candidacy process takes place after a minimum of 12 credits have been completed. MU-SU M.S.W. faculty members evaluate students to determine if they have the potential for completing the requirements of the social work program. Qualifications are based on academic performance in line with university standards and demonstrated ethical behavior, values, and commitment to social work as a career. The social work faculty has the right to dismiss at any time students found not qualified for social work practice.

Degree Requirements

Students enrolling in the Regular Program must complete 60 credits of graduate study including: 15 credit hours of field practicum, 6 credit hours of electives, and 39 credit hours of required coursework. B.S.W. graduates in the Regular Program

may receive exemption for some coursework, as per admission guidelines.

Students enrolled in the Advanced Standing Program must complete 36 credit hours of graduate study including: 9 credit hours of field practicum, 9 credit hours of electives, and 18 credit hours of required coursework including a summer "bridge" course.

Due to the cohort nature of this program, all courses must be taken in sequence. The Regular Program can be completed in two years full time (four courses per academic semester plus summer courses) or four years part time (two courses a semester). The Advanced Standing Program can be completed in one year full time or two years part time. Both programs are year round.

COURSES

Students enroll in either the regular (60 crs.) or the advanced (36 crs.) program. Students in the regular program take both the required foundation year and the concentration year courses including two elective courses. Students in the advanced program take the required advanced bridge course, the concentration year courses, and three elective courses.

Foundation Year Courses

SWK 501	Principles and Philosophies of Social Work	3
SWK 505	Understanding Social Work Practice with Diverse Populations	3
SWK 510	Human Behavior in the Social Environment I	3
SWK 511	Human Behavior in the Social Environment II	3
SWK 515	Social Welfare Policy	3
SWK 520	Micro/Mezzo Social Work Practice	3
SWK 521	Macro Social Work Practice	3
SWK 525	Research Methods	3
SWK 530	Field Practicum I	3
SWK 531	Field Practicum II	3

Advanced Standing (Bridge Course)—3 crs.

SWK 601	Integrative Seminar	3
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Concentration Year Courses

Advanced Courses—all students including Advanced Standing—24 crs.

SWK 610	Advanced Human Behavior in the Social Environment	3
SWK 615	Advanced Social Welfare Policy	3
SWK 620	Advanced Micro/Mezzo Social Work Practice	3
SWK 621	Advanced Macro Social Work Practice	3
SWK 625	Advanced Research Methods	3
SWK 630	Advanced Field Practicum I	5
SWK 631	Advanced Field Practicum II	4

Electives—6-9 credits required

GRN 510	Foundations of Applied Gerontology I: Social Context of Aging	3
GRN 610	Social and Public Policy in Aging	3
SWK 602	Behavioral Health Care Settings	3
SWK 603	Gender Issues	3
SWK 604	Health Care Settings	3
SWK 605	Child Welfare Settings	3
SWK 606	School Settings	3
SWK 607	Emergency Mental Health and Trauma	3
SWK 608	Program Management	3
SWK 609	Introduction to Art Therapy	3
SWK 612	Social Work and the Law	3

Teacher Education Department

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Han Liu, Ph.D.

Andrea Malmont, Ed.D.

Laureen Nelson, D.Ed.

Eucabeth Odhiambo, Ed.D.

Mary Paxton, Ed.D.

Donald Philpot, Ph.D.

Jennifer Pyles, Ph.D.

Cheryl Slattery, Ed.D.

Rebecca Ward, Ph.D.

Robert Ziegenfuss, Ph.D.

James Zullinger, M.Ed.

Programs Offered

The Department of Teacher Education offers graduate programs leading to the Master of Education degree in two areas: curriculum and instruction, and reading. Curriculum and instruction includes the following cluster choices: early childhood education, elementary education, middle level education as well as biology, English, geography/earth science, history, mathematics, and modern languages secondary education. The early childhood cluster includes three options: M.Ed. only; M.Ed. with state certification for those who hold elementary, middle level, or special education certification; and M.Ed. with state certification for those who have no previous teaching certification or a certificate other than mentioned in option two. The M.Ed. in reading includes certification as a reading specialist.

Admission to Teacher Education Programs

All applications for admission to our Teacher Education programs must begin with application to the School of Graduate Studies. The Teacher Education department will supply the applicant with required program application forms after notification the individual has met the requirements for the graduate school.

Applicants to the Teacher Education programs must provide review materials by the specified date to ensure consideration. If the applicant is interested in starting in the spring semester, all materials must be received by September 1. If the applicant is interested in starting in the summer semester(s), all materials must be received by February 1. If applicants are interested in starting in the fall semester, all materials must be received by April 1. Students must be interviewed and admitted to the program before they will be allowed to enroll in courses.

1. Applicants must have a baccalaureate degree from an accredited college or university.
2. Applicants must present an official transcript showing at least a 2.75 cumulative quality point average for undergraduate studies. Those who do not qualify will be required to take either the Graduate Record Exam (GRE) or the Miller Analogies Test (MAT) prior to admission. Applicants for certification programs must have a 3.0 cumulative quality point average for undergraduate students.
3. Applicants to the reading specialist program are expected to have prior certification in either elementary or secondary education.
4. It is strongly recommended applicants possess relevant experience prior to admission to graduate study.
5. With the application to the graduate school, the applicant will receive a packet of materials containing reference forms, a personal data form, and a request for a résumé.
6. Submit all the above materials to the graduate office on forms provided by the department. *Only the forms provided by the department will be accepted.* When all documents have been returned, program faculty will invite the applicant to the next scheduled interview session.
7. Appear for an interview with one of the faculty.
8. Following the interview each applicant will be assessed by the program with regard to relevant life/work/academic experiences as well as overall impression from the on-campus interview and applicant's references.

Program Requirements

In order to be approved for graduation, each student is required to have a planning sheet on file in the graduate office, approved by the assigned academic advisor.

The courses for a student who enrolls in a certification program along with a master's degree may include undergraduate coursework. There may be from two to four semesters of these courses that will be identified on an individual basis. Candidates for initial certification must demonstrate competency in student teaching.

ELEMENTARY EDUCATION SUPERVISOR

For information concerning the post-master's degree program leading to Pennsylvania certification as an Elementary Education Supervisor, refer to Supervisory Certification Programs in the Educational Leadership and Special Education Department (p. 71).

CURRICULUM AND INSTRUCTION (M.ED.)

The curriculum and instruction master's degree program is intended for individuals who possess a teaching certificate. Individuals not holding a certificate may be enrolled at the discretion of the department. Only the early childhood education cluster has options that do not require students to hold certification. The degree is designed to enhance teaching and learning through exploration of theoretical principles and practical applications to educational settings.

The 36-credit M.Ed. program consists of a core of 18 credits in four areas that contribute to best practice: curriculum and assessment (3 crs.), effective teaching and leadership (6 crs.), the learner (6 crs.), and research (3 crs.).

In addition to the core courses, students will select one of the following clusters of 18 credits:

- Early Childhood Education
- Elementary Education
- Middle Level Education
- Secondary Biology Education
- Secondary English Education
- Secondary Geography/Earth Science Education
- Secondary History Education
- Secondary Mathematics Education
- Secondary Modern Languages Education

Students in the early childhood, elementary, and middle level clusters are all required to take TCH 609 Internship and Action Research Seminar. This course serves as the capstone experience, synthesizing theory and practice as participants engage in studying and subsequently conducting the action research process.

PROGRAM CORE (18 CRs.)

CURRICULUM AND ASSESSMENT (3 crs.)

ECH 577	Early Childhood Curriculum and Assessment	3
TCH 511	Elementary School Curriculum and Assessment	3
TCH 524	Middle School Curriculum and Assessment	3
ELP 512	Curriculum for the Modern Secondary School	3

EFFECTIVE TEACHING AND LEADERSHIP (6 crs.)

Effective Teaching (3 crs.)

TCH 501	Effective Teaching: Theory and Practice	3
TCH 502	Strategies for Critical Thinking and Problem-Solving	3

Leadership (3 crs.)

ECH 563	Leadership in Early Childhood Education	3
ELP 518	The Role of Supervision in Promoting Student Achievement	3

THE LEARNER (6 crs.)

Development (3 crs.)

TCH 575	Advanced Child Development	3
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Individual Differences (3 crs.)

ECH 510	Including Children with Special Needs in Early Childhood Education	3
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EEC 475	Inclusive Education: A Practical Approach for Educators	3
EEC 526	Topics in Spec Ed: Working w/ Students with Exceptionalities	3
ELP 569	Seminar: Diversity in Education	3

FOCUS ON RESEARCH (3 crs.)

TCH 600	Elements of Research	3
BIO 605	Graduate Research	1-6
ENG 600	Elements of Research	
GEO 546	Geoenvironmental Research I	3
HIS 600	Historical Research Methods	3
HIS 601	Research in Local and Regional History	3

(TCH 609 does not meet this core requirement)

Cluster Requirement (18 crs.)

Student will choose the program cluster most closely related to their personal/educational needs.

EARLY CHILDHOOD CLUSTER

OPTION A: M.Ed. in Curriculum and Instruction— Early Childhood Education specialization

Core Courses (18 crs.)

ECH 577	Early Childhood Curriculum and Assessment	3
TCH 501	Effective Teaching: Theory and Practice	3
TCH 502	Strategies for Critical Thinking and Problem-Solving	3
ECH 563	Leadership in Early Childhood Education	3
TCH 575	Advanced Child Development	3
ECH 510	Including Children with Special Needs in Early Childhood Education	3
TCH 600	Elements of Research	3

Early Childhood Education Specialization (12 crs.)

ECH 520	Social and Emotional Development in Early Childhood	3
ECH 530	Cognitive and Language Development in Early Childhood Education	3
ECH 540	Families and Early Childhood Education	3

Electives with Advisement (6 crs.)

ECH 410	Physical, Motor, and Sensory Development in Early Childhood	3
RDG 528	Foundations of Literacy Development	3
TCH 440	Gender Equity in Education	3
TCH 490	Selected Topics in Teacher Education	1-3
TCH 612	Thesis I	3
TCH 613	Thesis II	3

OPTION B: M.Ed. and Early Childhood teaching Certification for students who already hold certification in elementary, special education, or middle school education.

Meet all requirements for Option A.

Applicants with current certification who wish to pursue Pre K-4 certification will follow the Option C plan after an individual evaluation of coursework.

Early Childhood Block (12 crs.)

ECH 340	Preschool and Kindergarten Curriculum	3
ECH 460	Family School and Community Partnerships	3
ECH 470	Language Development, Literacy, and Play in Early Childhood Education	3
ECH 462	Practicum in Early Childhood Concentration with Administrative Field Experiences	3

OPTION C: M.Ed. and Early Childhood Certification for students without any existing certification.

Meet all requirements for Options A and B.

TCH 560	Making Social Studies Dynamic	3
TCH 546	Teaching Science in the Elementary School	3
ECH 540	Families and Early Childhood Education	3
ECH 415	Professional Practicum in PK-4	3
RDG 528	Foundations of Literacy Development	3
TCH 542	Modern Elementary School Mathematics	3
RDG 443	Reading Measures and Interventions in PK-4	3
EEC 526	Topics in Spec Ed for School Counselors and other School Professionals: Working w/ Stud with Except	3
EEC 423	Effective Instructional Strategies for Children with Exceptionalities	3
EEC 483	Assessing Children with Exceptionalities for Curricular Decision-Making	3
RDG 383	English Language Learners in PK-4	2
ECH 489	Early Childhood Student Teaching	12
ECH 563	Leadership in Early Childhood Education	3
ECH 577	Early Childhood Curriculum and Assessment	3
ECH 520	Social and Emotional Development in Early Childhood	3
ECH 530	Cognitive and Language Development in Early Childhood Education	3

Note: TCH 600 and TCH 609 are required to complete the master's degree in Early Childhood Education.

Additional courses:

ECH 330	Primary Curriculum	3
ECH 360	Assessment in Early Childhood and Early Intervention	3
EDU 495	Student Teaching and Professional Practicum	9-15

Note: EDU 495: (9 crs.)

ELEMENTARY EDUCATION CLUSTER

Elementary Content Area (9 crs.)

RDG 528	Foundations of Literacy Development	3
TCH 542	Modern Elementary School Mathematics	3
TCH 546	Teaching Science in the Elementary School	3
TCH 560	Making Social Studies Dynamic	3

Elementary Electives (6 crs.)

TCH 440	Gender Equity in Education	3
TCH 445	Strategies for Effective Classroom Management	3
TCH 490	Selected Topics in Teacher Education	1-3
TCH 505	Instructional Technology for Today's Educator	3
TCH 543	Diagnostic Techniques in Teaching Mathematics in the Elementary School	3
TCH 545	Earth Science for Elementary Teachers	3
TCH 620	Curricular Decision Planning: Standards, Assessment, and Accountability	3

Required Internship

MIDDLE SCHOOL CLUSTER

Middle School Content Area (9 crs.)

TCH 423	Integrating Literature in Middle Grades	3
TCH 445	Strategies for Effective Classroom Management	3
TCH 505	Instructional Technology for Today's Educator	3
TCH 543	Diagnostic Techniques in Teaching Mathematics in the Elementary School	3
TCH 545	Earth Science for Elementary Teachers	3
TCH 620	Curricular Decision Planning: Standards, Assessment, and Accountability	3

Middle School Electives (6 crs.)

6 credits from any content area; i.e., biology, English, geography/earth science, history, mathematics.

Required Internship (3 crs.)

TCH 609	Action Research	3
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SECONDARY BIOLOGY CLUSTER

18 credits in biology from 400 and 500 level courses including those courses offered by the Marine Science Consortium at Wallops Island. Students may structure their coursework to meet individual sub-disciplinary interests. At least 12 credits must be taken in the Biology Department. With approval of the biology advisor, a maximum of 6 credits may be selected from geography, earth science, physics, and chemistry.

For further information, contact Dr. Tim Maret, Department of Biology at (717) 477-1401 or tjmare@ship.edu.

SECONDARY ENGLISH CLUSTER

18 credits in English from 400 and 500 level courses (at least 12 credits at 500-level).

ENG 420	Studies in Writing	3
ENG 426	Teaching Adolescent Literature	3
ENG 427	Advanced Poetry Workshop	3
ENG 428	Advanced Fiction Workshop	3
ENG 438	Technical Professional Writing II	3
ENG 464	Seminar in a Major Author	3
ENG 465	Seminar in Creative Nonfiction	3
ENG 466	Seminar in Literary Theory	3
ENG 467	Seminar in Drama	3
ENG 468	Seminar in Fiction	3
ENG 469	Seminar in Poetry	3
ENG 490	Selected Topics in English	1-3
ENG 505	Graduate Seminar in Poetry	
ENG 506	Graduate Seminar in Fiction	
ENG 507	Graduate Seminar in Drama/Film	
ENG 511	Seminar in Cultural Studies	3
ENG 512	Seminar in Composition and Rhetoric	
ENG 515	Seminar in American Literature	
ENG 516	Seminar in British Literature	
ENG 517	Seminar in World Literature	
ENG 518	Seminar in Multicultural Literature	3
ENG 530	Seminar in Creative Writing	
ENG 525	Seminar in Teaching English/Language Arts	3

SECONDARY GEOGRAPHY/EARTH SCIENCE CLUSTER

18 credits in geography/earth science from 400 and 500 level courses. While there are numerous 400 level courses available, students must adhere to the university policy regarding the maximum number of 400 level credits that may be taken.

Technique Courses (minimum of 3 crs.)

Students may take more than 3 credits.

GEO 420	GIS III: Advanced Geographic Information Systems	3
GEO 425	Image Processing	3
GEO 440	Field Techniques	3
GEO 441	Quantitative Methods	3
GEO 450	Geography-Geology Field Studies	1-3
GEO 517	Applied Geographic Information Systems	3
GEO 530	Mapping Sciences	3

GEO 517, GEO 530: GIS I is a prerequisite

Content Area Courses (maximum of 15 crs.)

Students may use techniques courses to count in this section.

ESS 404	Applied Meteorology and Climatology	3
ESS 413	Mineral and Rock Resources	3
ESS 442	Environmental Geology	3
ESS 490	Selected Topics in Earth Science	1-3

ESS 594	Selected Topics in Earth Science	1-3
GEO 402	Medical Geography	3
GEO 404	Groundwater and Hydrogeology	3
GEO 415	Regional Geographic Studies	3
GEO 444	Environmental Land-Use Planning	3
GEO 446	Water Resources Management	3
GEO 490	Selected Topics in Geography	1-3
GEO 594	Selected Topics in Geography	1-3
GEO 503	Fundamentals of Geoenvironmental Research	3
GEO 514	Urban Environment	3
GEO 522	Geoenvironmental Hydrology	3
GEO 524	The Geologic Environment	3
GEO 528	Geography of Economic and Environmental Systems	3
GEO 531	Geomorphology	3
GEO 532	Disease and the Environment	3
GEO 533	Science of Land Use Change	3
GEO 536	Problems of the Atmospheric Environment	3
GEO 542	Land-Use Regulations	3

GEO 490/GEO 594 (including Marine Science Consortium)

GEO 533: GIS I is a prerequisite.

Maximum of 15 credits.

Three credits may be taken with advisement from geography/earth science, biology, history, political science, chemistry, or international studies.

SECONDARY HISTORY CLUSTER

18 credits in history from 400 and 500 level courses.

United States and North American History (3 crs.)

HIS 402	Revolutionary America	3
HIS 413	Pennsylvania History	3
HIS 428	Issues in the Gilded Age and Progressive Era	3
HIS 430	U.S. Cultural History	3
HIS 513	Seminar in U.S. Women's History	3
HIS 515	Seminar in 20th Century U.S. Social History	3
HIS 516	Seminar in African American History	3
HIS 519	Seminar in International Relations	3
HIS 525	Seminar in U.S. Regional History	3
HIS 526	Seminar in the Civil War Era	3

Global Connections (3 crs.)

HIS 407	Women in Comparative Perspective	3
HIS 410	The Islamic World	3
HIS 421	Issues in 19th Century Europe	
HIS 454	China and the Outside World	3
HIS 510	Seminar in the Social History of Education	
HIS 514	Population in History	
HIS 532	20th Century Europe	

HIS 534	Seminar in Modern German History	3
HIS 535	Seminar in Medieval Studies	3
HIS 540	Comparative Latin American History	
HIS 545	Comparative Latin American History	
HIS 550	Seminar in South Asia History	
HIS 555	Seminar in Russian, Soviet, and Post-Soviet History	
HIS 558	Seminar in East Asia and the Modern World	3
HIS 562	Seminar in African History	3

History Electives (12 crs.)

Any of the above courses or:

HIS 490	Selected Topics in History	1-3
HIS 499	Historiography	3
HIS 594	Selected Topics in History	1-3
HIS 598	Independent Study	3
HIS 599	Readings in History	3-6

Secondary Mathematics Cluster

18 credits in the content area of mathematics.

Choose up to 6 credits from any 400-level MAT courses.

MAT 400	History of Mathematics	3
MAT 410	Numerical Analysis	3
MAT 413	Statistics II	3
MAT 421	Number Theory and Cryptography	3
MAT 422	Partial Differential Equations	3
MAT 425	Advanced Algebraic Structures	3
MAT 430	Complex Analysis	3
MAT 441	Real Analysis I	3
MAT 450	Combinatorics	3
MAT 456	Deterministic Methods of Operations Research	3
MAT 476	Probability	3
MAT 486	Mathematical Statistics	3
MAT 490	Selected Topics in Mathematics	3

Must take at least 12 credits from any 500-level MAT courses.

MAT 516	Mathematical Modeling	3
MAT 527	Number Theory Discovery	3
MAT 528	Algebra for Teachers of Mathematics	3
MAT 534	Geometrical Concepts	3
MAT 538	Topics in Discrete Mathematics	3
MAT 543	Concepts of Calculus	3
MAT 551	Technology in the Teaching and Learning of Mathematics	3
MAT 552	Mathematical Discovery	3
MAT 572	Probability for Middle and High School Teachers	3
MAT 573	Statistics for Middle and High School Teachers	3
MAT 594	Selected Topics in Mathematics	3

Note: A maximum of 12 credits of 400 level courses may be applied to requirements for the curriculum and instruction master's degree. This limit includes both core and cluster courses.

SECONDARY MODERN LANGUAGES CLUSTER

18 credits in language and methodology from 400 to 500 level courses (*at least 12 credits at the 500 level*). This cluster offers an option in French or in Spanish.

Department Requirements

Student must demonstrate evidence of oral and written proficiency in the target language by taking the ACTFL OPI (oral proficiency interview) and the ACTFL written test. The minimum score on both tests must be at the advanced-low level. Any course in Spanish/French at the undergraduate level with a C or a D would have to be repeated. Student must complete the degree in accordance with the College of Education requirement of seven years. Completion of the master's will entail an oral exam and a Spanish/French Education research project of which the outcome will be reviewed by all Spanish/French faculty.

Spanish

SPN 510	Hispanic Theater	3
SPN 515	Hispanic Poetry	3
SPN 520	Hispanic Fiction	3
SPN 525	Hispanic Culture	3
SPN 530	Spanish Linguistics	3
SPN 535	History of Spanish Language	3

French

FRN 510	French Theater	3
FRN 515	French Poetry	3
FRN 520	French Fiction	3
FRN 525	French Speaking Countries	3
FRN 530	French Linguistics	3
FRN 535	History of French Language	3

Language Education Methods

EDU 522	Advanced Methods for the Teaching of World Languages	3
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EARLY CHILDHOOD SUPERVISOR

For information concerning the post-master's degree program leading to Pennsylvania certification as an Early Childhood Education Supervisor, refer to Supervisory Certification Programs (p. 71).

READING (M.ED.)

A graduate program leading to the Master of Education degree with specialization in reading is offered for fully certified elementary and secondary school teachers. After the successful completion of all program requirements, a teacher is certified as a K-12 Reading Specialist in the state of Pennsylvania.

Admission

Admission into the reading program is offered throughout the year. To become a candidate in the reading program, an application must be completed through the admissions office. The reading program admission packet includes the following: candidate application, three professional reference letters, and transcripts from all undergraduate and graduate coursework (a 3.0

QPA is required on previous coursework for admission). If the candidate is not presently teaching, the following additional information is required at the time of the interview:

1. The Pennsylvania State Police Request for Criminal Records Check (Act 34)
2. The Federal Criminal History Record (Act 114)
3. The Child Abuse History Clearance (Act 151)

When an application is deemed complete by the admission office, it will be forwarded to the reading program facilitator who assigns the candidate an advisor. The advisor will contact the candidate for an interview. During the interview, the advisor will determine if program background courses are met. Required for entrance into the program is successful completion of two literacy courses at the undergraduate or graduate level—Teaching of Reading and Teaching of Language Arts, and a course focused on students with exceptionalities. If the candidate is lacking any background courses, admission into the program will be delayed until the course requirements are met. If all requirements are met, the applicant is awarded foundational status.

FOUNDATIONAL STATUS

The first category for candidates is called foundational status. When a candidate is granted foundational status, he/she may enroll in the following courses in any sequence:

Courses

See Planning Sheet for two special education courses.

TCH 600	Elements of Research	3
RDG 413	Teaching Reading to English Language Learners	3
RDG 528	Foundations of Literacy Development	3
RDG 529	Reading and Reasoning Beyond the Primary Grades	3
RDG 537	Brain Based Strategies for Literacy Learners Experiencing Difficulties	3

TCH 600: topic of proposal MUST be literacy related.

Following successful completion of all foundational level courses with a minimum grade of B, candidates are to complete a portfolio (info at www.ship.edu/reading). Following successful completion of all foundational status requirements, candidates are awarded practicum status.

PRACTICUM STATUS

The second category for candidates is practicum status. Candidates who have been awarded practicum status are eligible to enroll in the following courses in the prescribed sequence:

Courses

RDG 520	Tutoring Secondary Students	3
RDG 532	Diagnosis and Assessment in Reading	3
RDG 533	Advanced Diagnosis and Assessment in Reading	3
RDG 534	Laboratory Practicum in Reading	3
RDG 535	Seminar in Literacy, Language, and Reading	3

RDG 533 and RDG 534 must be taken together.

Courses must be completed with a minimum grade of B and the online portfolio also must be completed. Candidates are required to reach the passing score on the Praxis exam for Reading Specialist as set by the Pennsylvania Department of Education. Following successful completion of all practicum status requirements, candidates are awarded program completion status.

PROGRAM COMPLETION

When candidates have been granted program completion status, they are eligible to apply for graduation through Registrar's office. For more information on the Reading Program, go to ship.edu/reading.

READING SUPERVISOR

Certification is obtained through the Pennsylvania Department of Education.

READING RECOVERY

Reading Recovery is an early intervention program used in school districts for at-risk first grade students. The program helps to develop early reading/writing skills and to build successful literacy experiences. Shippensburg University is the Pennsylvania State Site for Reading Recovery. The Pennsylvania Department of Education, Ohio State University, and the National Diffusion Network collaborated in developing and funding this State Site.

TEACHER LEADER TRAINING— POST-MASTER'S DEGREE

The teacher leader training program is an 18-credit hour post-master's program that includes the following required courses:

REQUIREMENTS

Fall semester

RDG 554	Practicum in Reading	3
RDG 601	Language Development Theory	3
RDG 607	Reading Recovery Training for Teachers I	3

Spring semester

RDG 555	Practicum in Assessment	3
RDG 602	Reading Thoughts and Processes	3
RDG 608	Reading Recovery Training for Teachers II	3

Interested persons must submit an application (available from Janet Bufalino) and be accepted as a Teacher Leader participant. Participants must be sponsored by a school district or Intermediate Unit Consortium. Included with the training program and the required coursework for two semesters, participants will be expected to complete extensive field work, work individually with four Reading Recovery children each day, demonstrate teaching in front of a one-way observation window with at least three of their own Reading Recovery children, lead a seminar of Reading Recovery teachers to learn the techniques of a Teacher Leader, perform arranged special collaborative activities designed to help the Teacher Leader candidate explore the full role of the Teacher Leader, and collect and maintain data on children in accordance with guidelines for evaluation. All coursework must be taken during one academic year.

Specific information on the teacher leader program and the application process can be obtained by contacting Dr. Janet Bufalino, the Trainer of Teacher Leaders at Shippensburg University, at (717) 477-1166 or jmbufa@ship.edu.

TEACHER TRAINING— POST-BACCALAUREATE DEGREE

The Reading Recovery teacher training program is a 6-credit graduate program which includes one 3-credit course in the fall semester and one 3-credit course in the spring semester.

These courses are taught through approved teacher training sites by Teacher Leaders in school-based sites. Interested individuals should contact Dr. Janet Bufalino, jmbufa@ship.edu or (717) 477-1166 for information on teacher training sites across Pennsylvania, Maryland, Virginia, and West Virginia.

SCIENCE EDUCATION (M.A.T. WITH TEACHER CERTIFICATION)

The Master of Arts in Teaching (M.A.T.) in Science Education is designed for professionals and recent college graduates who already hold a degree in a scientific discipline and who wish to teach science in either a middle school or high school. Completion of the program will result in both a master's degree and teacher certification through the Pennsylvania Department of Education.

Students will complete a sequence of seven courses to teach research-based principles of safe and effective science instruction as well as a twelve-week student teaching practicum. Students will also complete and present a research project and comprehensive teaching portfolio.

Program Delivery

The 30-credit M.A.T. is designed to meet the needs of working professionals and can be completed in 18 months. Cohorts of ten to fifteen students will complete a sequence of six modules using a combination of monthly face-to-face meetings, online interactions, and videoconferencing. Each module will be three credit hours. At the beginning of the program, students will be assigned an experienced science teacher in a local school as a mentor and approximately twenty-five hours of observation and co-teaching per module will be required.

During the twelve-week student teaching practicum (12 crs.), students will implement principles from the modules and assume responsibilities for planning, instruction, and assessment. Two capstone projects, a professional portfolio and the results of a research project, will be presented at the end of the program.

The sequence for completing the M.A.T. is as follows:

- One module during the first summer. (3 crs.)
- Four modules during the first academic year. (12 crs.)
- One module during the second summer (3 crs.)
- Student teaching during the fall semester of second academic year. (12 crs.)
- Presentation of professional portfolio and research project during December of fall semester of second academic year.
- Assistance with job placement during the spring semester of the second academic year.

M.A.T. Admission Requirements

- Bachelor's degree in a scientific discipline from a regionally accredited institution.
- Official undergraduate and graduate (if applicable) transcripts sent to Shippensburg University.
- Completed application including a statement of intent summarizing their motivations and goals for entering the teaching profession.
- Two letters of recommendation.
- Passing scores on two teacher certification exams required by the Commonwealth of Pennsylvania: Praxis I Pre-Professional Skills Test and Praxis II Subject Assessment. More information can be found at the Educational Testing Services website (www.ets.org). Applicants may be conditionally admitted if PRAXIS scores are pending.

The M.A.T. is designed for students who already have content expertise in a scientific discipline that is consistent with one or more of the secondary (grades 7-12) licensure areas in Pennsylvania: biology, chemistry, physics, earth and space science, environmental science, and general science. Applicants may also pursue Middle Level (grades 4-8) certification. The M.A.T. directors will review each applicant's transcripts and Praxis examination scores as part of the admissions process. Applicants are encouraged to register for the Praxis examinations as soon as possible to ensure that scores are available by the application deadline. Final M.A.T. program admission is contingent upon passing the Praxis examinations.

COURSE REQUIREMENTS

Program Core (30 crs.)

SCED 510	Foundations of Science Education in the United States	3
SCED 520	Research and Contemporary Issues in Science Education	3
SCED 530	Instructional Strategies and Technology in the Science Education	3
SCED 540	Assessment in Science Education	3
SCED 550	Safety and Welfare in Science Education	3
SCED 560	Accommodating all Students in Science Teaching	3
SCED 590	Student Teaching and Science Education Practicum	12

For More Information

Office of Professional, Continuing, and Distance Education Studies at (717) 477-1502, pcde@ship.edu, or www.ship.edu/SciEd.

COURSES OF INSTRUCTION

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

Courses with numbers from 400 to 499 are open to graduate and advanced undergraduate students. Graduate students enrolled in 400 level courses are expected to meet the customary standards appropriate to graduate-level studies. These standards are reflected in the specific requirements found in syllabi for each of the 400 level courses. A maximum of 12 semester hour credits of 400 level courses may be applied to the requirements of the master's degree.

ACC - Accounting

ACC 401 - Advanced Accounting (3 crs.)

Third of three courses involving an intensive study of accounting concepts, theories, and practices relative to external financial reporting. Topics include consolidated financial statements, accounting in the international environment, and governmental accounting. Issues relating to full disclosure and the role of the Securities and Exchange Commission and professional accounting organizations in financial reporting are considered. *Prerequisite: ACC 311 (C grade or better).*

ACC 404 - Auditing (3 crs.)

Introduction to standards and procedures employed by professional accountants in performing audits. The objectives of an audit and the types of examinations necessary for rendering opinions on financial reports and for other specified purposes are considered. *Prerequisite: ACC 311 (C grade or better).*

ACC 406 - Advanced Tax Accounting (3 crs.)

More in-depth coverage of impact of federal income tax on business entities including proprietors, corporations, and partnerships. Primary emphasis is taxation of corporations and flow-through tax entities. Includes expanded coverage of tax research and planning as well as ethical responsibilities in tax practice. *Prerequisite: ACC 306 (C grade or better).*

ACC 412 - Advanced Cost Analysis and Control (3 crs.)

Considers a range of problems related to accumulation and use of accounting data for decision making by the management of the business enterprise. Analytical costing techniques are developed by integrating cost concepts and information generated by the accounting system with quantitative business methods. Emphasis on relationship of decision theory and the cost accounting function to the management information system. Explicit consideration given to behavioral foundations for planning and control. *Prerequisite: ACC 312 (C grade or better).*

ACC 418 - Accounting Information and Control Systems (3 crs.)

Designed to provide an understanding of the accounting function as a subsystem within the total management information system. Consideration given to the source of data processed by the accounting system and the form in which it is stored in order to support the planning, control, reporting, and evaluation activities of management. Emphasis on relationship of the information needs of management to the classification of data and the design of the accounting system. *Prerequisite: ACC 312 (C grade or better).*

ACC 490 - Selected Topics in Accounting (3 crs.)

Considers contemporary accounting issues affecting society and businesses (private, public, and not-for-profit) in both the national

and international spheres. *Prerequisites: ACC 311 (C grade or better) or departmental permission.*

ART - Art and Design

ART 400 - Contemporary Methods in Art Education (3 crs.)

Explores studio materials, art-making processes, and modes of thought from a culturally diverse perspective and current methods regarding studio art instruction in the fields of elementary and secondary education. Exploring their personal artwork, students introduced in role of art teacher as facilitator, guide, and mentor, plus the various instructional strategies and models currently employed for success in the field. Besides exploring a cross section of contemporary art-making processes, students will analyze how they create in order to allow others to understand that process. Students will gain competency in lesson planning, organization, classroom management and assessment. Student emerges with a clearer understanding of the relationship between ideas, process, critique, and the vital role of the studio teacher. Consists of classroom lecture/presentation and intense studio activity. Includes an early field experience, designing, and implementing a studio art project with elementary-age students at the campus laboratory school. All artworks, projects, and experiences will culminate in critique and evaluation.

ART 425 - Computer Design IV (3 crs.)

Fourth-level course taught on the Macintosh computer. Learning the art of animation and multimedia production including sound and video editing and compositing. Using page composition and illustration/painting/digital photography techniques learned in Computer Design I, II, and III, students learn to compile text, paintings, and photographs into a composite multimedia program. Using paint and ink effects, information will be enhanced, with sound and video added to it. Elements and principles of design, working between software programs, the use of a color scanning device, video and still camera capturing devices, and CD authoring will be covered. Content includes techniques directed at creating visually strong multimedia productions. *Prerequisite: ART 217.*

ART 430 - Computer Design V (3 crs.)

Fifth-level course taught on the Macintosh computer. Learning the art of animation and multimedia production including sound and video editing and compositing for web design. Using page composition and illustration/painting/digital photography techniques learned in Computer Design I, II and III, students will learn how to compile text, paintings, and photographs into a composite web program. Using transparency and vector embedding techniques, information will be enhanced with added sound and video. Elements and principles of design, working between software programs, the use of a color scanning device, video, and still camera capturing devices, and CD authoring will be covered. Content includes techniques directed at creating visually sound and effective web design.

ART 435 - Computer Design VI (3 crs.)

Sixth-level course taught on the Macintosh computer. Examines the book as a physical artifact, as the material embodiment of text and visual imaging. Topics include the transitions between hand production and mechanical production, methods of bookmaking, printers and publishers, letter forms and typography, paper, page formats and layouts, illustrations, bindings, and the purpose of the book with special emphasis on the relationships between meaning and physical form and the complex conventions of the book. The art of typographic design, calligraphy, book and portfolio design,

papermaking, and bookmaking skills following both traditional and nontraditional techniques are covered. Using page composition and illustration/painting/digital photography techniques learned in Computer Design I, II, and III, students enlarge and enhance their knowledge of typography and how to use it in book design. They will use their computer illustration, painting, and digital photographic skills to add visuals into the composite book. Elements and principles of design, working between software programs, the use of a color scanning device, and digital camera capturing devices will be covered. Content includes techniques directed at creating visually and thematically strong and unique artist's portfolios and books. *Prerequisite: ART 217.*

ART 490 - Selected Topics in Art (1 to 3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

BIO - Biology

BIO 406 - Mammalogy (3 crs.)

Surveys various areas of mammalian biology including mammalian characteristics, evolution, classification, zoogeography, adaptive radiation, reproduction, population dynamics, behavior, physiology, ecology, and economic importance. Laboratory material covers trapping, study of skin preparation, identification of North American mammals, examination of skeletal and external adaptations, plus field and laboratory techniques. Graduate students are required to complete an additional course project. Includes a weekend field trip. Two hours lecture and two hours lab/week. *Prerequisites: BIO 161 and BIO 162*

BIO 408 - Principles of Virology (3 crs.)

Covers morphology, replication cycles, and genetics of important bacterial, plant, and animal viruses as well as the use of gene therapy. Special emphasis given to viral pathogens of humans including the pathophysiology, transmission, treatment, and prevention of viral diseases. Newly emerging viral diseases and their impact on society will also be discussed. Graduate students expected to submit a 5-10 page term paper on a virology-related topic approved by the instructor. *Prerequisites: BIO 260; BIO 385 pre- or co-requisite. (Offered fall semester).*

BIO 409 - Immunology (3 crs.)

Introduction to immunology, including immunity, serology, immunochemistry, and immunobiology. Other topics include immunodeficiency diseases, tumor immunology, transplantation immunology, autoimmune diseases, and allergies. Graduate students will be required to complete additional course requirements. Three hours lecture/week. *Prerequisites: BIO 260, BIO 385 pre- or co-requisite.*

412 - Ichthyology (3 crs.)

Surveys the biology of fishes, emphasizing the evolution, systematics, ecology, and conservation of Pennsylvania species. Laboratory and field exercises will include fish sampling, species identification, population estimation, community characterization, and fisheries techniques such as aging fishes and estimating population structure and production. Two hours lecture and two hours lab/week. *Prerequisites: BIO162 and BIO242 or graduate status. Graduate students enrolled in this class will be required to complete additional course requirements.*

BIO 417 - Herpetology (3 crs.)

Study of amphibians and reptiles including classification, evolution, functional morphology, ecology, and husbandry. Laboratory work

includes anatomical study, identification, and field trips. Graduate students will be required to complete additional course requirements. Two hours lecture and two hours lab/week.

Prerequisites: BIO 161 and BIO 162.

BIO 418 - Molecular Biology (3 crs.)

Examines structure and expression of prokaryotic and eukaryotic genes. Topics include experimental techniques used to clone, express, and analyze DNA sequences; chromosome and gene structure; mechanisms of DNA replication and repair; mechanisms of transcription and translation; the regulation of transcription; RNA processing and post-transcriptional regulation; gene regulation in development; and molecular mechanisms of mutagenesis and cancer. Includes discussion of current literature and use of online resources for analysis of DNA sequences. Graduate students will be required to complete additional course requirements. *Prerequisites: BIO 260.*

BIO 419 - Ornithology (3 crs.)

Study of birds including their taxonomic relationships, anatomy, physiology, ecology, and conservation. A major focus of the course is identification of avian species found in Pennsylvania and the eastern U.S., which will be accomplished via field trips and museum skin study. Laboratory instruction will include methods of avian capture, census techniques, museum skin preparation, and field trips. Two Saturday field trips and one weekend field trip are required. Graduate students are required to complete an additional course project. Two hours lecture and two hours lab/week.

Prerequisites: BIO 161 and BIO 162.

BIO 423 - Plant Pathology (3 crs.)

Basic course in plant pathology considers the major general groups of plant diseases together with specific representative diseases for each group and methods for their control. Three hours lecture/week. *Prerequisites: BIO 161 and BIO 162.*

BIO 425 - Biota of Florida (2 crs.)

Seminar/field course deals with the biology of warm temperate and subtropical Florida including vegetation, fauna, geology, history, and economy. Offered spring semester of even-numbered years, it requires a single weekly one-hour class meeting plus and intensive 10-day field trip to parks, natural area, and refuges in Florida over spring break. Field trip costs for the student include food, transportation, entrance, and camping fees. Graduate students will be required to complete additional course requirements.

Prerequisite: Biology major with junior standing. (Offered spring semester, even years).

BIO 430 - Principles of Evolution (3 crs.)

Introduction to evolutionary principles, their applications, and the appropriate literature. Major topics include the history of evolutionary concepts, the species and speciation processes, phylogenetic patterns and their reconstruction, classification, biogeography, extinction, and biological nomenclature. Graduate students will be required to complete additional course requirements. Three hours lecture/week. *Prerequisites: BIO 161, BIO 162, and BIO 260. (Offered spring semester).*

BIO 442 - Aquatic Ecology (3 crs.)

Examines the ecology of aquatic habitats including streams, springs, lakes, wetlands, and estuaries. Lectures explore the physical, chemical, and biological forces shaping aquatic systems, with an emphasis on the ecology and conservation of freshwater organisms and habitats. Field and laboratory work includes sampling techniques, characterization of aquatic habitats, and identification of aquatic organisms. A weekend field trip is

required. Two hours lecture and three hours lab/week. Graduate students enrolled in this class will be required to complete additional course requirements. *Prerequisites: BIO 162 or graduate standing; Ecology and one year of chemistry strongly recommended. (Offered fall semester, even years)*

BIO 444 - Conservation Biology (3 crs.)

Applies the principles of population ecology, population genetics, biogeography, animal behavior, and paleobiology to the maintenance of global diversity and natural systems. Research theory is applied to conservation policy and management decisions. Two periods lecture and two periods lab/discussion per week. Includes midweek and weekend field trips. Graduate students will be required to complete additional course requirements. *Prerequisite: BIO 142 or BIO 242. (Offered spring semester, even years).*

BIO 448 - Field Botany and Plant Taxonomy (3 crs.)

Deals with principles of classification and systematics of vascular plants, with emphasis on local plant communities. Field trips and laboratories develop skill in the use of technical and popular identification manuals. Library readings develop familiarity with principles and literature of plant systematics and ecology. Memorization of selected, local species required. Field trips include several local excursions plus a weekend trip to natural areas in Pennsylvania and the Delmarva Peninsula. Graduate students will be required to complete additional course requirements. Two hours lecture and two hours lab/week. *Prerequisite: BIO 100 or BIO 162 (Offered Fall semester)*

BIO 450 - Endocrinology (3 crs.)

Study of the glands of internal secretion and their biochemical and physiological role in development, growth, metabolism, homeostasis, and reproduction of animals. Graduate students will be required to complete additional course requirements. Three hours lecture/week. *Prerequisite: BIO 350 or BIO 351. (Offered fall semester).*

BIO 461 - Techniques in Biotechnology (3 crs.)

Provides hands-on experience with standard molecular biology and immunological techniques commonly used in industrial and academic laboratories. Methods include immunoblotting methods, ELISA, isolation and analysis of DNA and RNA, protein purification, and gene cloning techniques. Graduate students will be required to complete additional course requirements. One-hour lecture and four hours lab/week. *Prerequisites: BIO 385 or BIO 418 or CHM 301. (Offered spring semester).*

BIO 485 - Biological Microscopy and Imaging (3 crs.)

Covers principles and techniques in macrophotography, light microscopy, especially micro-photography and videography, and scanning electron microscopy (SEM). Includes specimen handling and preparation including basic theory and practice in fixation, dehydration, dark room techniques, and computer imaging. Perform basic maintenance and alignment of the SEM. Research project required. Graduate students required to complete additional course requirements. Two hours lecture and two hours lab/week. *Prerequisite: Upper division or graduate standing. (Offered spring semester, odd years).*

BIO 491 - Selected Topics in Biology (1 to 3)

Opportunity to offer courses in areas of departmental major interest not covered by regular courses.

BIO 494 - Field Research Techniques (3 crs.)

Overview of methods for investigating biological field problems. Students will learn to use a variety of techniques in field conditions. Collection, analyses, and interpretation of data will be emphasized. Methods applied in current professional literature will be discussed. Graduate students will be required to complete an independent project culminating in a written report. *Prerequisite: Graduate or upper division standing. (Offered summers only.)*

BIO 514 - Aquatic Entomology (3 crs.)

Rigorous course concentrating on the taxonomy and morphology of the insects having representatives spending all or part of their life cycles in aquatic environments. Intensive field and laboratory work centers on collection, classification of representative types, and studies of ecological roles of various aquatic habitats. *Prerequisite: Entomology, graduate status, or permission of instructor.*

BIO 515 - How to Research, Write, and Publish a Scientific Paper (1 cr.)

Introduces biology graduate students to techniques and skills required to successfully research, write, and publish scientific papers. Topics include: What is research?; Why publish?; experimental design; literature searches; preparing a manuscript; preparing tables and figures; what, how, and where to submit; the editorial review process; and oral and poster presentation of research papers.

BIO 520 - Plant Ecology (3 crs.)

Explores structure and function of natural plant communities and exposes students to methods of field sampling and data analysis in community ecology. Will include field labs to local forest and wetland plant communities. *Prerequisite: Ecology.*

BIO 541 - Ecosystems (3 crs.)

Explores pattern and process in ecosystem, emphasizing elemental cycling and energy flow in and across terrestrial and aquatic ecosystems, and interfaces with biotic communities. Will include methods and approaches in ecosystem ecology and review of primary literature. *Prerequisite: Ecology.*

BIO 547 - Wetland Ecology (3 crs.)

Wetlands and the resident wildlife are studied as a unit to better understand the fragility of this invaluable habitat. Classification, delineations, wetlands protection techniques, current status of wetlands, specifically coastal wetlands will be the focus.

BIO 555 - Comparative Environmental Physiology (3 crs.)

Considers comparative aspects of life functions in selected representatives of the animal kingdom with respect to their different environments. *Prerequisite: Animal Physiology or Human Physiology or permission of instructor.*

BIO 558 - Microbial Ecology (3 crs.)

Examines the interactions of bacteria, yeasts, and protozoans in the environment. The role of each type of microorganism in degradation and nutrient recycling is explored in the laboratory and in the field. Topics include soil, water, and gut microbiology; microorganisms as geochemical agents; microbial succession; and seasonal variation in microbial populations. *Prerequisite: Microbiology.*

BIO 559 - Evolutionary Ecology (3 crs.)

Lectures and discussion periods cover topics of physiological ecology, interspecific interactions, population ecology, community structure, the ecological niche, coevolution, and biogeography. *Prerequisite: A previous college ecology course or permission of instructor.*

BIO 577 - Ecomorphology (3 crs.)

Intended for students interested in a holistic approach to biology and experimental research. Reviews the morphological adaptations of animals with emphasis on vertebrates. The functional and behavioral aspects of these adaptations are discussed in the context of the evolutionary and ecological relationships of key taxa. Students are expected to apply their academic background to research, deliver, and discuss the morphological traits enhancing animal's biological fitness. Ramifications of Ecological Morphology (i.e., molecular biology, genetics, physiology, systematics, philosophy) also could be considered. Course is a combination of lectures, student presentations, and discussions of current scientific literature. *Prerequisite: BIO 363 Vertebrate Zoology or BIO 370 Comparative Vertebrate Anatomy or permission of instructor.*

BIO 593 - Biometry (3 crs.)

Examines the uses of parametric and non-parametric statistics in biological research. Students gain practical experience in the application of statistical analyses to sets of original data using both hand calculation and packaged computer programs with emphasis on the organization and preparation of data for analysis, the selection of appropriate statistical tests, and the interpretation of the results of analyses of both published and unpublished data. *Prerequisite: At least 14 credit hours of college biology. (Offered spring semester.)*

BIO 594 - Selected Topics in Biology (1 to 3)

Department opportunity to offer courses in areas of major interest not covered by regular courses.

BIO 599 - Independent Study (3 crs.)

Opportunity to pursue special studies in biology or biology education on topics not available in other courses.

BIO 605 - Graduate Research (1-6)

Opportunity to engage in research under the guidance of a member of the biology faculty.

BIO 606 - Graduate Research (3 crs.)

Opportunity to engage in research under the guidance of a member of the biology faculty.

BIO 607 - Graduate Research (3 crs.)

Opportunity to engage in research under the guidance of a member of the biology faculty.

BIO 608 - Graduate Research (3 crs.)

Opportunity to engage in research under the guidance of a member of the biology faculty.

BIO 609 - Internship (3 crs.)

Opportunity for students to gain practical experience in their chosen career area.

BIO 612 - Thesis I (3 crs.)

Provides master's degree candidates with the opportunity to conduct a major research project. A research proposal and literature review are required. First in a two-course sequence. A temporary grade of Q will be assigned until the thesis is completed.

BIO 613 - Thesis II (3 crs.)

Second in a two-course sequence of graduate courses designed to provide master's degree candidates an opportunity to conduct a major research project. Students implement the research designed in Thesis I, collect data, write a thesis, and make an oral presentation. *Prerequisite: BIO 612.*

BSN - Business**BSN 510 - Economic and Information Systems Environment (4 crs.)**

Introduction to macroeconomic and microeconomic principles with an emphasis on applications to modern business problems. Major topics include supply and demand, consumer behavior, theory of the firm, market structure and competition, monetary and fiscal policy, and international trade. The role of information technology in business environment is also discussed, including such topics as doing business on the Internet, database management, client-server networks, and information security. This course is part of the graduate business certificate and does not count toward the MBA degree.

BSN 511 - Business Operations and Analysis (4 crs.)

Explores the responsibilities and processes needed for a business to provide a product or service to customers. Case studies and real-world examples are used extensively to investigate the problems encountered in these business operations. Quantitative and non-quantitative methods and models are used in the analysis of topical subject areas such as forecasting, capacity planning, materials management, scheduling, and quality control. This course is part of the graduate business certificate and does not count toward the MBA degree.

BSN 512 - Essentials of Accounting and Finance (4 crs.)

Introduces the basics of financial accounting and financial management. The accounting concepts, practices, and principles that guide the preparation of the balance sheet, income statement, and the statement of cash flows are all presented. Financial management concepts and techniques are used to evaluate the financial performance of the firm. Topics include financial statement analysis, working capital management, and capital budgeting. Emphasis is placed on the interpretation and limitations of financial reports and their use in evaluating the performance of the firm. This course is part of the graduate business certificate and does not count toward the MBA degree.

BSN 513 - Organizational Behavior and Marketing (4 crs.)

The organizational behavior component examines human behavior in organizations and considers the practical skills managers need to motivate peers and subordinates, make decisions, deal with conflict, and succeed in a team-based environment. The marketing component examines marketing planning, marketing research, buyer behavior, market segmentation and targeting, as well as the key elements of a marketing strategy. This course is part of the graduate business certificate and does not count toward the MBA degree.

BSN 514 - Strategic Management and Leadership (4 crs.)

Explores strategic vision and direction. The importance of achieving a fit between the internal and external environment for organizational survival and success is a central issue. The strategic concepts of competitive advantage, strategy formulation and implementation, power and influence, organizational change, and leadership will be addressed. Case studies, business articles, and text material will be used to examine strategy and leadership theory, heuristics, and practice. This course is part of the graduate business certificate and does not count toward the MBA degree.

CHM - Chemistry

CHM 420 - Biochemistry II (3 crs.)

Extension of CHM 301. Develops to a greater depth the topics of bioorganic chemistry, enzyme kinetics and mechanisms, intermediary metabolism and metabolic controls, and certain selected topics necessary for an understanding of modern biochemistry. *Prerequisite: CHM 301.*

CHM 421 - Biochemistry Laboratory (1 cr.)

Introduces various laboratory techniques essential to the practice of modern biochemistry including separations, purification, and analytical methods. *Prerequisite or concurrent: CHM 301.*

CHM 480 - Organic Reactions and Mechanisms (3 crs.)

Concerned with theoretical organic chemistry with emphasis given to stereochemistry, electronic theory, reaction mechanisms, and the application of physical methods to organic chemistry. *Prerequisite: CHM 222 or permission of instructor.*

CHM 481 - Advanced Inorganic Chemistry (4 crs.)

Focuses on solid-state chemistry, acid and base chemistry, oxidation and reduction chemistry, physical techniques of inorganic chemistry, reactions of coordination complexes, d-metal organometallic chemistry, nanotechnology, cluster chemistry, and bioinorganic chemistry. The topics will build upon the material from CHM 381. Three periods lecture and three periods lab/week. *Prerequisite: CHM 381.*

CHM 490 - Selected Topics in Chemistry (1 to 3)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CMPE - Computer Engineering

CMPE 410 - Real-Time and Mobile Computing (4 crs.)

Students will develop applications for real-time operating systems and today's hand-held devices. Students will learn about hard and soft real-time systems, differences between general purpose operating systems and real-time operating systems (RTOS), how to identify and meet real-time goals in an application. Students will also learn how to design, develop, and deploy applications to a mobile operating system, such as a modern smartphone, PDA, or table computer. *Prerequisite: Completion of CMP E320 with a C or better.*

CMPE 420 - Digital and Reconfigurable Computing (4 crs.)

In-depth study of issues involved in developing software for real-time study and/or embedded systems. Demands and architecture of real-time operating systems. Performance and benchmarking. Issues in designing for performance. Mission-critical and safety-critical systems. Software engineering tools and techniques specific to these systems. *Prerequisite: CMP E320.*

CNS - Counseling and College Student Personnel

CNS 490 - (1 to 3)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 503 - Advanced Field Experience (3 crs.)

Continuation of the CNS 580/589 field experience in schools. *Prerequisites: CNS 580/589, advisor's approval, and pre-registration form. Site selection must be approved by advisor.*

CNS 504 - Introduction to School Counseling (3 crs.)

Studies the history of school counseling and the development of counselors and counseling programs in schools. Provides practical means to make use of counseling and guidance theories and techniques, as seen in school settings. Describes administrative activities that provide the framework for school counseling services. Studies prevention and intervention strategies that contribute to the academic mission of the school as well as students' career, personal, and social development. Describes effective leadership, proactive strategies, and advocacy for students and counseling programs.

CNS 505 - Organization and Administration of School Counseling Services (3 crs.)

Studies basic philosophy, principles, and current trends in the organization and administration of comprehensive school counseling programs. Emphasis is given to line-staff organization, guidance committees, counselor-teacher relationships, adult-community guidance services and roles of school personnel and community agencies in understanding and promoting the school-community guidance programs. *Prerequisites: Completion of Phase I of program and CNS 585.*

CNS 508 - Marital, Couple, and Family Counseling (3 crs.)

Designed to aid student in gaining experience and competency in the use of therapeutic interventions with married person, couple, and families. Emphasis on the understanding of prominent theoretical modalities and applying the relevant techniques to classroom simulations. Students gain understanding and experience in dealing therapeutically with typical marital, couple, and family problematic concerns. *Prerequisite: Completion of Phase I or permission of instructor, CNS 578.*

CNS 509 - Multicultural Counseling (3 crs.)

Designed to sensitize students and promote an understanding of their own self as a cultural being and to acquire expertise in the use of therapeutic interventions with diverse populations. Emphasis on the learning of approaches and application of techniques that facilitate intra- and intergroup and multicultural experiences.

CNS 510 - Drug and Alcohol Counseling (3 crs.)

Designed to aid students in gaining understanding of the theories of causation and treatment of alcohol and drug addiction abuse. Students also gain experience and competency in the use of therapeutic interventions and techniques through classroom simulations. *Prerequisite: Completion of Phase I or permission of instructor.*

CNS 512 - Group Counseling and Leadership Skills (3 crs.)

Provides a didactic and experiential overview of a variety of group theories and group types. Particular attention given to tools and techniques necessary to function effectively in the role of group leader. Emphasis on both the acquisition of knowledge and the skills of group leadership theories and techniques. *Prerequisite: CNS 578 or concurrent registration with permission of instructor.*

CNS 513 - Group Counseling with Alcohol and Drug Clients (3 crs.)

Focuses on the theory and application of group therapy as it relates to the treatment of substance abuse and addiction. The course examines the dynamics of group development and process and integrates that with addiction recovery models. The student is exposed to (through experiential exercises and assignments) the requirements of creating, screening, opening, facilitating, and closing a therapy group where addiction is the clinical focus. Throughout the course, students will be active participants in their own group process, thus allowing an understanding from an

experiential viewpoint. Role playing and specific intervention techniques are explored and practiced.

CNS 514 - Relapse Prevention and Recovery Process for Alcohol and Drug Clients (3 crs.)

Designed to educate counselors on the process of recovery from alcohol and drug addiction and methods in preventing relapse. A developmental perspective is presented along with a variety of support group philosophies and perspectives; from cognitive restructuring to spirituality. This course enables students to understand how treatment is effective and impacts the internal process of clients suffering from addiction. Clinical interventions and developmental approaches will aid counselors in their work with this most important population. Significant to this course is the presentation of a comprehensive model of relapse prevention.

CNS 515 - Career Development (3 crs.)

Stresses development of counselor competencies in the areas of collecting, evaluating, classifying, filing, and using accurate occupational, educational, and personal-social informational materials. Also considered are theories of vocational choice, the psychology and sociology of work, vocational interests and aptitudes, the relationship of school and college subjects to jobs and the use of information in helping students decide on matters of curricular choice. Counseling interviews are employed to give students practical experiences in the use of informational materials with counselees.

CNS 517 - Clinical Approaches for Clients with Co-Occurring Disorders (3 crs.)

Exposes students to the diagnostic categories found in the DSM-IV-TR, specifically the clinical implications for a diagnosis of substance abuse/dependence and a co-occurring disorder. The complicating clinical issues of personality disorders in relation to multiple Axis one diagnosis are also discussed and treatment approaches based on current literature are provided. This course will help practitioners learn to more effectively differentially diagnose substance abuse/addiction from chemically induced disorders and other psychiatric disorders. Students will learn and/or review basic assessment methods, treatment plan development, and the use of a treatment team in the counseling process. Time will be spent in class role playing a variety of disorders/diagnoses so as to provide an opportunity for students to practice therapeutic interventions/approaches.

CNS 519 - Implications for Human Development for Counseling (3 crs.)

Specifically designed for counselors. Content is rooted in developmental theory with an emphasis on identity development. Professional counselors pay particular attention to our clients' development across the lifespan; implications of their development on all aspects of life weigh importantly on the way we conceptualize clients' challenges, adjustments, disorders, and growth. The information and experiences gained will serve as a structural foundation for understanding theories of development and their significance in the work professional counselors perform.

CNS 522 - Assessment Techniques (3 crs.)

Detailed study of collecting meaningful information about individuals and their environment through both testing and non-testing procedures. Emphasis is on understanding the information in order to help individuals cope with concerns and make decisions. *Prerequisite: CNS 578.*

CNS 524 - The DSM and Psychopathology for a CNS Perspective (3 crs.)

Studies the classification system of psychopathology. Special emphasis placed on building counseling models based on the integration of the classification and the client's individual situation. *Prerequisite: CNS 559*

CNS 526 - Brief Therapy for Marital, Family, and Couples Counseling (3 crs.)

Provides an overview of the knowledge needed to use brief therapy as a lens for systemic interventions. The primary focus is on the integration of the techniques and theoretical underpinnings necessary to effectively and efficiently create change in systems using a brief model. Particular attention is given to knowledge and awareness of the role of brief therapist.

CNS 527 - Models and Techniques in Couples, Marital, and Family Therapy (3 crs.)

Covers the major models used in couples, marital, and family therapy. In conjunction with review of these theories will be a focus on effective use of the specific techniques that accompany each model. Particular attention will be given to the role of the family therapist in each model. Ethical and cultural implications will be reviewed.

CNS 528 - Assessment from A Family Systems Perspective (3 crs.)

Not intended to explore psychometric theory but rather to introduce students to contemporary models and strategies for integrating appropriate assessment measures into work with children, couples, and families. Diagnostic, evaluative, and treatment assessment paradigms will be explored as they pertain to family systems based counseling. Current controversies about assessment in family systems counseling will be discussed.

CNS 529 - Systemic Counseling with Individuals, Couples, and Families (3 crs.)

Designed to aid students in gaining experience and competency in the use of therapeutic interventions with marital dyads, couples, and family systems. Emphasis is on the student's understanding of prominent theoretical modalities and applying the relevant techniques to classroom simulations and case studies. Students will acquire both understanding and experience in dealing therapeutically with typical marital, couple, and family problematic concerns.

CNS 530 - Clinical Supervision Theory and Techniques (3 crs.)

Designed to help counselors in a variety of settings to develop and/or enhance their professional functioning as clinical supervisors. No prior supervision experience is necessary. A concurrent experience providing supervision will be included in the course. *Prerequisite: A master's degree in counseling or its equivalent.*

CNS 531 - Advanced Study in Multicultural Issues (3 crs.)

Designed for current practitioners in helping services who already have earned a master's degree who desire to expand knowledge and skills in working with diverse populations and in creating a society where "freedom and justice for all" can become a reality. *Prerequisite: A master's degree in counseling or its equivalent.*

CNS 532 - Advanced Drug and Alcohol Counseling (3 crs.)

Acquaints student with the concept of alcohol and drug dependence as a primary, progressive, chronic, potentially fatal, and symptomatic disease that impacts the entire family system. Explores the disease from a bio-psycho-social and spiritual perspective as well as demonstrating various multidisciplinary approaches to arresting and successfully treating the illness.

Attention to principles of early intervention, prevention, special populations, and standards necessary for achieving certification as an addiction counselor in Pennsylvania. Explores the developmental models of recovery, relapse prevention methods, and treating the dually diagnosed client. Course is designed to prepare students as facilitators who can utilize addiction concepts and skills in a variety of counseling settings. *Prerequisite: Master's degree in counseling or its equivalent.*

CNS 536 - Counseling Challenging Adolescents (3 crs.)

Students will learn several unique ways of joining, finding empathy, developing, and sustaining healthy boundaries, and creating ways of containing all that the most challenging adolescent clients bring to the therapeutic counseling relationship. A wide variety of professional counseling and therapy settings will be considered. *Prerequisite: Master's degree in counseling or its equivalent.*

CNS 538 - Selected Topics in Counseling (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 539 - Advanced Field II (3 crs.)

Continuation of CNS 580, Clinical Field Experience I, placement. Students must register for this course in order to satisfy the six (6) credit hour field experience requirement. Students must complete 300 clock hours for each field experience in a professional setting appropriate to their career interests, skills, and program of study. Site selection must be approved by advisor. Course offered on a pass/fail basis. *Prerequisites: Completion of CNS 580, approval of advisor, and pre-registration form.*

CNS 545 - Leadership by Encouragement (3 crs.)

Provides a forum for students to learn how the principles and methods of Adlerian Psychology can be used to enhance leadership potential. Focus on assessing leadership style, listening, motivation, enhancing teamwork and productivity, and encouragement. *Prerequisite: At least a bachelor's or master's degree in counseling, psychology, education, social work, administration, or business.*

CNS 551 - Clinical Supervision Group I (2 crs.)

Family systems supervision groups (of no more than six students each) will be scheduled at locations and times that suit the members of each group during the three different semesters of coursework. Students will take turns presenting client cases they are working with in their current therapeutic setting, including audio or videotaped segment of their sessions. Group processing will focus on helping the therapist with areas of concern or difficulty in clarifying the dynamics of the client family system, accurately assessing the problem, developing or refining an appropriate treatment plan, effectively using a variety of therapeutic interventions, evaluating client progress and incorporating new information and understanding in the treatment process, and using the self of the therapist effectively.

CNS 554 - Clinical Supervision Group II (2 crs.)

Family systems supervision groups (of no more than six students each) will be scheduled at locations and times that suit the members of each group during the three different semesters of coursework. Students will take turns presenting client cases they are working with in their current therapeutic setting, including audio or videotaped segment of their sessions. Group processing will focus on helping the therapist with areas of concern or difficulty in clarifying the dynamics of the client family system, accurately assessing the problem, developing or refining an appropriate treatment plan, effectively using a variety of therapeutic interventions, evaluating client progress and incorporating new

information and understanding in the treatment process, and using the self of the therapist effectively.

CNS 559 - Introduction to the Helping Services (3 crs.)

Surveys a wide range of helping services and introduces the basic philosophical concepts underlying each, the principles by which such services operate, and the therapeutic practices that are characteristic of each service. Emphasis is on defining the helping relationship within each area and clarifying the ethical considerations that apply.

CNS 560 - Principles of College Student Personnel (3 crs.)

Surveys basic principles and practices of student personnel work in higher education. Consideration is given to the purpose of higher education and student affairs, exploring the missions, cultures, and campus climates of varying types of institutions. Within that context, students will learn principles of professionalism, multiculturalism, human development theory, management of student affairs functional areas, necessary competencies, and trends.

CNS 562 - Student Personnel Work in Higher Education (3 crs.)

Designed to provide the role concept for students in student personnel work at the college/university level. Designed to deal with specific issues and trends in the field; develop a design or operational model for program development, implementation, and evaluation; establish an operational role concept for specific student personnel positions. *Prerequisites: Completion of Phase I, CNS 560, and CNS 565.*

CNS 563 - Professional Orientation to Community Counseling (3 crs.)

Designed to provide a comprehensive overview of the rapidly evolving field of community counseling. Studies basic philosophy, principles, and current trends in the provision of community counseling services. Students gain understanding of topics such as: psychoeducational and developmental counseling, health-promotive services, indirect counseling services, crisis counseling, and ethical and legal issues.

CNS 564 - Grief and Loss Issues in Counseling (3 crs.)

Designed to help students identify, clarify the differences between grief, mourning, and bereavement and understand grief as a response to any loss, including death. Deals with the development of skills as a competent and caring counselor and helps to achieve a deeper self-understanding of the student's own feelings, attitudes, and values regarding loss and death. *Prerequisite: Completion of Phase I or permission of instructor, CNS 578.*

CNS 565 - The College Student and the College Environment (3 crs.)

Examines the impact of the college environment on both traditional and nontraditional students and provides in-depth understanding of the characteristics, attitudes, and developmental needs of those students. It also suggests methodology for identifying needs and assessing environmental characteristics. *Prerequisite: CNS 560.*

CNS 567 - Counseling Children (3 crs.)

Intense study of basic theoretical foundations and approaches in counseling children, including play therapy. Childhood psychological disorders are surveyed using the current edition of the Diagnostic Statistical Manual of Mental Disorders. *Prerequisites: completion of Phase I.*

CNS 568 - Professional Orientation to Mental Health Counseling (3 crs.)

Designed to provide a comprehensive overview of the rapidly evolving field of mental health counseling. Studies basic philosophy, principles, and current trends in the provision of mental health counseling services. Students gain understanding of topics such as: treatment of psychopathology, diagnosis, direct counseling services, prevention and psychoeducational approaches, crisis counseling, and ethical and legal issues.

CNS 569 - Selected Topics in Counseling (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 570 - Working with Dreams, Sandtrays, and Music in Counseling (3 crs.)

Designed to acquaint students with the Hill cognitive-experiential model of dream work and the use of music and sandtray in counseling. Includes a strong experiential component that provides students with an opportunity to practice various approaches for working with dreams and using music and sandtray in counseling. *Prerequisite: CNS 578.*

CNS 573 - Theories of Counseling (3 crs.)

Intensive study of basic concepts and theoretical foundations of counseling. Emphasis is on the student's ability to conceptualize client concerns, select appropriate counseling interventions, and apply the relevant theories to classroom simulations. *Prerequisite: CNS 559 or concurrent registration with permission of instructor.*

CNS 574 - Selected Topics in Counseling (3 crs.)

Department opportunity to offer courses in areas of major interest not covered by regular courses.

CNS 576 - Selected Topics in Counseling (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 577 - Selected Topics in Counseling (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 578 - Pre-practicum in Counseling (3 crs.)

Designed to provide an understanding of, and applied practice in using, the fundamental skills of the helping process. Student-centered methods encourage collaboration, active listening, and peer-to-peer learning exchanges. Emphasizes the development of effective relationship building skills as well as the practice of approaches that facilitate client growth and change. Increased counselor self-understanding and self-analysis are a critical component of the course as well as students beginning to develop a personal style of counseling. Counselor and client characteristics, relationship variables, and external factors (e.g., societal and environmental) that influence the helping process will be addressed. *Prerequisite: CNS 559.*

CNS 580 - Clinical Field Experience I (3 crs.)

The culminating experience for all programs, the field experience sequence consists of six (6) semester hours and is the internship requirement of the SU counseling programs. Students must complete 300 clock hours for each field experience in a professional setting appropriate to their career interests, skills, and program of study. Site selection must be approved by advisor. Course is offered on a pass/fail basis. *Prerequisites: Completion of Phases I and II, advisor's approval, attendance at orientation meeting the prior semester, pre-registration form, and candidacy. CNS 589 is required to satisfy the six credits for field placement.*

CNS 581 - Counselor Supervision (3 crs.)

Provides experience in supervision of counselor trainees, including review of interview recordings; constructive critique of trainees, individually and in group settings; and reading and criticizing of written reports. Significant involvement with counselor trainees, if required, in order to experience a true supervisory and helping relationship. *Prerequisites: Permission of the advisor and prior employment as a counselor. Note: Restricted to students enrolled in the Supervisory Certificate Program through Educational Administration and Foundations Department.*

CNS 585 - Practicum in Counseling (3 crs.)

Field-based assignment in an agency, school, or institutional setting providing supervised professional experiences. Students must accumulate a minimum of 150 clock hours at a site appropriate to their program of study during one academic semester. Students must have a site approved by their advisor prior to course registration. *Prerequisites: A grade of B or higher in CNS 578, permission of advisor, attendance at orientation meeting the prior semester, and pre-registration form.*

CNS 586 - Advanced Practicum in Counseling (3-6)

Extension of CNS 585, permits student to gain greater specialized competencies in the same general setting. *Prerequisites: CNS 585, consent of advisor, attendance at orientation meeting the prior semester, and pre-registration form.*

CNS 587 - Research Seminar in Counseling (3 crs.)

Presents the advanced student an opportunity to examine, evaluate, synthesize, and bring into final form previous learning and research to a consistent philosophical approach. *Prerequisite: CNS 600.*

CNS 588 - Counseling Strategies and Techniques (3 crs.)

Designed to aid student in gaining experience and competency in the use of therapeutic interventions from a variety of theoretical modalities. Emphasis placed on understanding, experiencing, and applying each technique; the appropriateness of its application, its effect and side effects, and the theoretical concepts underlying the change process facilitated by the intervention. *Prerequisites: Completion of Phase I and CNS 573.*

CNS 589 - Clinical Field Experience II (3 crs.)

Continuation of CNS 580, Clinical Field Experience I, placement. Students must register for this course in order to satisfy the six (6) credit hour field experience requirement. Students must complete 300 clock hours for each field experience in a professional setting appropriate to their career interests, skills, and program of study. Site selection must be approved by advisor. Course offered on a pass/fail basis. *Prerequisites: Completion of CNS 580, approval of advisor, and pre-registration form.*

CNS 590 - Advanced Clinical Field Experiences (3 crs.)

Continuation of the CNS 580/589 field experience. Course offered on a pass/fail basis. *Prerequisites: Completion of CNS 580/589, advisor's approval, and pre-registration form. Site selection must be approved by advisor.*

CNS 596 - Selected Topics in Counseling (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 597 - Selected Topics in Counseling (1 cr.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 598 - Selected Topics in Counseling (1 cr.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

CNS 599 - Independent Study (3 crs.)

Provides opportunities for students to pursue independent study designed to develop critical thinking and individual initiative through planned scholarly endeavor. The student, under the advisement of an assigned faculty member, engages in a study of a significant program not clearly a part of existing courses.

Prerequisite: Permission of advisor.

CNS 600 - Research and Statistics (3 crs.)

Introduction to problems of structure and function of research in the counseling programs where attention is directed to the importance of individual differences, measurement of several variables, and the task of developmental understanding. Designed to develop competencies and explores empirical findings in both the production and consumption of current research. It considers experimental design, practical use of both descriptive and inferential statistics with application to measures of central tendency, variability, dispersion, correlation, and tests of differences.

CNS 602 - Advanced School Counseling Field Experiences (3 crs.)

Continuation of the CNS 580/589 field experience in schools.

Prerequisites: CNS 580/589, advisor's approval, and pre-registration form. Site selection must be approved by advisor.

CNS 609 - Internship (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

CNS 610 - Internship II (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

CNS 612 - Thesis I (3 crs.)**CNS 613 - Thesis II (3 crs.)****COM – Communication/Journalism****COM 410 - Women and the Media (3 crs.)**

Introduces overview of the many and varied contributions of women in mass media. Through slide lectures, documentary videos, and student research presentations, students explore the lives and work of women media professionals, explore some of the notable historical obstacles to women in this once male-dominated field: sexist attitudes, stereotypes, lack of women in management, and conflicts between job and family. Also examines the ethnic diversity of women in this important professional field. Will explore how women's style and vision differs from their male counterparts.

Prerequisite: COM 111 and COM 112 or permission of instructor.

COM 425 - Feature Writing (3 crs.)

Deals with specialized writing for newspapers and magazines and offers instruction and practice in developing ideas for articles, using research methods, and writing for mass audiences. Keyboarding skills required. *Prerequisite: COM 111 and COM 112 or permission of instructor.*

COM 451 - Electronic Field Production (3 crs.)

Designed to develop and train visual essayists—single-camera videographers who link pictures, words and sound to create electronic stories. Creates, develops, and polishes skills and techniques needed to produce video documentaries, corporate videos, and live event productions. Skills and techniques include

telling the visual story without words; writing and shooting long-form TV stories, interviews, and features; learning visual grammar; perfecting video editing; and developing on-camera performance abilities. *Prerequisites: COM 224 and COM 284, or permission of instructor.*

COM 452 - Multimedia Journalism (3 crs.)

Focus is preparation for careers as professional multimedia journalists. The course emphasizes development of news judgment, journalistic responsibilities, and journalistic ethics in the digital environment. Students work in classroom and television environments to acquire and improve reporting, writing, and technical skills needed to succeed in the modern television newsroom. Introduces the culture of the broadcast news environment, including meeting deadlines, reporting on numerous digital platforms and working in a team environment both in the field and in the newsroom. *Prerequisites: COM 224 and COM 284 or permission of instructor.*

COM 460 - Case Studies in Public Relations (3 crs.)

Reviews current public relations principles and practices as related to business, governments, institutions, and associations. Examines the application of PR principles and practices in the management of contemporary public issues and problems. Different evaluation criteria applied to graduate/undergraduate students. *Prerequisite: COM 111 and COM 112 or permission of instructor.*

COM 470 - Advanced Digital Photographic Communication (3 crs.)

Introduces principles of digital photography and teaches basic competencies to apply standard photo concepts to the realm of digital imaging. Students study history of digital photography, techniques of composition, and basic processes of producing digital photographs from electronic and traditional camera images. Emphasis on practical technique with electronic equipment (cameras, scanners, photo CDs, and other methods of image acquisition) and the manipulation of images through applications like Adobe Photoshop. Students are expected to develop an understanding of the relationship of digital photography to their professional goals. Different evaluation criteria applied to graduate/undergraduate students. *Prerequisite: COM 360 Basic Digital Photographic Communication or permission of the instructor.*

COM 476 - Magazine Design (3 crs.)

Provides opportunity to examine, discuss, and create periodical publications (magazines) in a variety of specialized formats. Develops skills in understanding and creating periodical publications by focusing on writing and design. Examines a variety of magazines to provide an understanding of content, typography, design, layout, and production. Students learn to create promotional materials necessary to develop audience for periodical publication. Students write and edit several stories for their own publication, which is final course project. Students produce a 32-page magazine as this final project. Graduate students conduct market research analysis and a strategic promotional plan in addition to standard coursework. *Prerequisite: COM 111 and COM 112 or permission of instructor.*

COM 478 - Digital Journalism (3 crs.)

Serves as the culminating experience for students in the Print Media Emphasis, and includes a professional project. Focus on the changing nature of technology and its use in news organizations to gather, analyze, synthesize, and disseminate information. Focuses on developing, researching, and writing specialized stories for newspaper and magazine websites. Students learn to approach stories as packages, developing story ideas that can be presented in

written, audio, and video formats. Focuses on writing and editing, written narrative, and capturing and editing digital audio and digital video segments, developing accompanying links, and designing a story package to be presented in print and on a website. *Prerequisite: COM 285.*

COM 481 - Digital Media Design (3 crs.)

Primarily deals with digital and interactive design techniques for multiple-platforms with emphasis on web design. It also includes lessons on how to format a web-based publication for mobile and digital pads, how to create basic interactive online advertisements and slideshows; and how to design interactive promotional publications.

COM 482 - Internet Communication (3 crs.)

Introductory course with fundamental knowledge concerning the construction, use, and importance of World Wide Web media for the communications industries. Students construct an actual website concentrating on the usability of web pages and websites while applying skills gained in class to work with real world clients. *Prerequisite: COM 111 and COM 112 or permission of instructor.*

COM 484 - Electronic Media Programming and Management (3 crs.)

Provides students with insights into the programming and management of: local TV and radio stations; local cable TV systems; national TV, radio, and cable TV networks; national DBS, DTH, and wireless cable services; and international Internet program providers. Emphasis on issues involving program creation and development, program scheduling, program distribution, audience evaluation of programs, and the management of station/system/network personnel. *Prerequisite: COM 111 and COM 112 or permission of instructor.*

COM 490 - Selected Topics in Communication/Journalism (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses. *Prerequisite: Junior standing.*

COM 491 - Selected Topics in Communication/Journalism (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses. *Prerequisite: Junior standing.*

COM 492 - Selected Topics in Communication/Journalism (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses. *Prerequisite: Junior standing.*

COM 505 - Public Relations Foundations (3 crs.)

Zeroes in on two elements of PR that have come to the forefront in the last few years: an emphasis on international PR and online PR tactics, particularly social media. The other two emphases of this course and will be ongoing concerns of PR professionals: ethics and research.

COM 506 - Public Relations Strategies (3 crs.)

Covers the techniques and approaches to strategic planning, strategic writing, and graphic/media design for organizational public relations. In strategic planning, students will learn how to develop objectives, formulate strategies, select tactics and implement plans for public relations activities that can better serve the organization's goals. The strategic writing component of this course will emphasize goal-oriented writing for a convergent world of print, broadcast, and online/social media. Crisis communication will also be studied in this course. Also addresses a creative skill—

graphic/media design—for public relations in a digital media environment.

COM 510 - Professional Seminar (3 crs.)

Explores the differences between code that works and good code. This will include: designing during development, characteristics of interfaces, naming conventions, defensive programming, selecting data types, organizing code, controlling loops, unusual control structures, table driven methods. Students will explore open source projects to practice evaluating the quality of code.

COM 511 - Modes of Film Communication (3 crs.)

Reviews the theory, history, and criticisms of films; analyzes the content and roles of various modes of film such as documentary, exposition, etc.; provides writing opportunities for the film medium.

COM 516 - Photographic Communication (3 crs.)

Surveys the history of photography; studies the theory of photography including light, exposure, optics, photographic chemistry, color and composition, and provides background in using photography as a communication tool.

COM 520 - Applied Mass Communication Research (3 crs.)

A required course for Communication Studies students designed to introduce them to a variety of applied research techniques. In particular, the course will examine surveys, focus groups, and content analyses. Provides students with the opportunity to engage in directed research projects, applying the methods and concepts discussed in class.

COM 526 - Emerging Mass Media Technologies (3 crs.)

Reviews and analyzes the role of developing and future telecommunications media technologies and their implication for today's media and society.

COM 527 - Digital Storytelling (3 crs.)

Communication organizations must meet their consumers in the digital world, so professionals with an understanding of writing to the digital content consumer are in high demand. This course is designed for the student seeking a career in a communications or related field. The course aims to prepare students to produce content for digital formats such as web and mobile platforms. Students will spend time researching and collecting information on a specific topic and produce a digital narrative that will entice consumers to explore the message. Emphasis will be given to well-written text, but the best producers understand the multi-faceted approach to digital content that would include visual content and consumer interaction.

COM 528 - Digital Media Workshop (3 crs.)

Examines the connections between digital technology, media content creation, and the social and individual influences on this content and its distribution. This course will require students to: (1) design and build an online identity using digital media tools and (2) narrate this process throughout the course via a weblog. Students will be expected to openly frame this process and interact with one another throughout the course, as well as engage and interact with the online world beyond campus.

COM 530 - Law and the Media (3 crs.)

In-depth study of the law that affects media. Focuses on the reasoning behind regulation, the impact of the laws, and the need for changes in current regulatory schemes. Legal research skills and methods are stressed.

COM 536 - World Broadcasting Systems (3 crs.)

Comparative study of international broadcasting program policies, economic systems, control, and organization. The use of broadcasting in international affairs as an instrument of propaganda, culture, and information dissemination. Monitoring of overseas broadcasts and discussions with representatives of domestic and foreign broadcast agencies.

COM 570 - Fundraising and Association Public Relations (3 crs.)

Introduction to the fundamentals of raising funds for education, religious, health, and social welfare organizations. Study includes a review of the conventional techniques used in reaching traditional funding sources. Association organization, membership development, and volunteer support round out the course.

COM 594 - Selected Topics Communication/Journalism (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

COM 603 - Professional Project in Mass Communications (3 crs.)

Students design a project of professional and intellectual interest that contributes both to their knowledge and to the field of communication/journalism. *Prerequisites: COM 500, 544, 561, 600. (This is an individualized instruction course open only to students who are working with an advisor on the professional project option.)*

COM 609 - Internship I (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

COM 610 - Internship II (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

CRJ - Criminal Justice**CRJ 501 - Foundations of Justice (3 crs.)**

Examines the nature, application, and impact of various theoretical approaches, practices, and assumptions regarding the function and operation of the criminal justice system.

CRJ 520 - Justice Administration and Management (3 crs.)

Studies bureaucracy and complex organizations with emphasis on the concepts and practices of the administration and management of agencies in the criminal justice system.

CRJ 550 - Graduate Seminar (3 crs.)

Introduces graduate students to the basic concepts, principles, and issues involved in the development of drug control policy in the United States since the early 1700s and the profound impact these factors have had on the public perception of drug use and the manner in which the criminal justice system functions.

CRJ 560 - Theories of Crime and Delinquency (3 crs.)

Examines etiology of criminal behavior including the process of becoming a criminal, patterns of criminal behavior, and social and individual consequences of crime and delinquency.

CRJ 570 - Legal Trends and Issues (3 crs.)

Explores in detail current trends and issues in law as they relate to the operation and management of the criminal and juvenile justice system.

CRJ 580 - Juvenile Justice System (3 crs.)

Examines the goals, organization, and operations of agencies and institutions that work with youthful offenders including current policies and proposals for their reform.

CRJ 585 - Treatment and Rehabilitation (3 crs.)

Examination and analysis of historical and contemporary correctional treatment and rehabilitation strategies, philosophies, ideologies, and developments relevant to correctional, organizational, and management policies and practices. Students critically focus on theoretical, practical, and policy issues relating to treatment and rehabilitation programs provided to adult and juvenile offender populations.

CRJ 590 - Justice Policy Analysis (3 crs.)

Analysis of the process by which policy decisions in criminal justice are derived and implemented and their consequence on the criminal justice system.

CRJ 593 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

CRJ 594 - Selected Topics in Criminal Justice (3 crs.)

Opportunity for the department to offer courses in areas of major interests not covered by regular course offerings.

CRJ 595 - Practicum I (3 crs.)

An original work done as a group or individual effort in an agency setting which results in a scholarly paper revolving around an issue germane to the participating agency. Significant involvement with the agency is necessary. The department must approve the selection of the agency and the issue. Limited to "weekend" students.

CRJ 597 - Practicum II (3 crs.)

An original work done as a group or individual effort in an agency setting which results in a scholarly paper revolving around an issue germane to the participating agency. Significant involvement with the agency is necessary. The department must approve the selection of the agency and the issue. Limited to "weekend" students.

CRJ 600 - Research Methods (3 crs.)

Survey of empirical research methods and their application in the field of criminal justice; includes research design, theories of sampling, data collection strategies and analysis of findings.

CRJ 610 - Quantitative Analysis (3 crs.)

Examines the relationship and application of statistical techniques to theory building and concept construction. Includes an overview of statistical methods with an emphasis on criminal justice. *Prerequisite: CRJ600.*

CRJ 612 - Thesis I (3 crs.)**CRJ 613 - Thesis II (3 crs.)****CRJ 617 - Internship I (3 crs.)**

Provides an opportunity to apply classroom (theoretical) learning in an agency setting; encourages the development of a professional identity and an appropriate set of professional skills and values; helps students identify or clarify their career interests; provides agencies with an opportunity to observe and evaluate potential staff; and provides students with the opportunity to conduct participant research in a justice agency. Student will encounter a variety of real world situations in which previously learned skills must be applied under the supervision of a practitioner. A full range of criminal justice agencies will be available for student selection.

CRJ 618 - Internship II (3 crs.)

Provides an opportunity to apply classroom (theoretical) learning in an agency setting; encourages the development of a professional identity and an appropriate set of professional skills and values,

helps students identify or clarify their career interests, provides agencies with an opportunity to observe and evaluate potential staff, and provides students with the opportunity to conduct participant research in a justice agency. Student will encounter a variety of real world situations in which previously learned skills must be applied under the supervision of a practitioner. A full range of criminal justice agencies will be available for student selection.

CRJ 635 - Restorative Justice (3 crs.)

Examines the elements of the Restorative Justice Model and its application for criminal justice policy and practice. The restorative justice model features classical criminology, victimology, and cognitive therapy. Instructs students on three elements of the BARJ Model that includes community protection, youth accountability, and competency development.

CSC - Computer Science

CSC 401 - Simulation Techniques (4 crs.)

Study of the statistical and modeling techniques necessary to build credible models. Techniques for gathering real world data and analyzing for model building and verification. Techniques for gathering data from models including sensitivity analysis, steady state analysis, and variance reduction techniques. Credible what if analysis for comparing two models. *Prerequisite: Completion of MAT 313 with a C or better.*

CSC 431 - Computer Networks (4 crs.)

Studies protocol suites, emphasizing the TCP/IP 4-layer model. Topics included are network addresses, sub netting, client/server network programming via the sockets API, network utilities, architecture of packets, routing, fragmentation, connection and termination, connection-less applications, data flow, and an examination of necessary protocols at the link layer, particularly Ethernet. Other topics may include FDDI, wireless, ATM, congestion control, and network security. *Prerequisites: Completion of CSC 111 with a C or better and completion of CSC 320 with a C or better.*

CSC 434 - Web Programming (4 crs.)

Teaches how to set up a website typical of one used in an online business. Includes preparing web pages in HTML, writing client-side scripts in Vbscript or JavaScript for active web pages, writing server-side scripts in Vbscript for active server pages, learning to set up and access a database for processing online ordering and searches, and some web server administration. Students will establish a website for an imaginary business of their choosing. *Prerequisite: Completion of CSC 371 with a C or better.*

CSC 440 - Compiler Design (4 crs.)

Introduction to design and implementation of compilers. General principles of compiler design are covered with emphasis on the following components: scanner, parser, semantic analyzer, code optimizer, and code generation. Symbol tables and error handling also covered. Includes implementation of a compiler for a simple language. *Prerequisites: Completion of CSC 111 with a C or better and completion of CSC 220 with a C or better.*

CSC 450 - Advanced Computer Graphics (4 crs.)

Introduction to a high-level 3-D renderer, the animation process, and advanced computer graphics topics. Majority devoted to learning 3-D modeling and animation techniques using a 3-D renderer, including topics such as object modeling, lighting, and key framing. Additional topics may include shadow generation, object interaction, and the comparison of various graphics APIs.

Projects will involve modeling with a 3-D renderer as well as a standard graphics package (e.g., OpenGL). *Prerequisite: Completion of CSC 350 with a C or better.*

CSC 451 - Computer Graphics Algorithms (4 crs.)

Explores the algorithmic foundations that underlie a typical computer graphics API. Topics include normals; 2-D and 3-D transformation matrices; projection matrices; clipping, raster scan algorithms; fill algorithms; hidden line and surface algorithms; light, color, and shading algorithms; curve fitting; surface representation. Students will implement various aspects of a computer graphics API. *Prerequisites: Completion of CSC 350 with a C or better and completion of MAT 318 with a C or better.*

CSC 462 - Artificial Intelligence (4 crs.)

Overview of artificial intelligence. Emphasis on basic tools of AI, search and knowledge representation, and their application to a variety of AI problems. Search methods include depth-first, breadth-first, and AI algorithms; knowledge representation schemes include propositional and predicate logics, semantic nets and frames, and scripts. Planning using a STRIPS-like planner will also be addressed. Areas that may be addressed include natural language processing, computer vision, robotics, expert systems, and machine learning. *Prerequisite: Completion of SWE200 with a C or better.*

CSC 463 - Introduction to Robotics (4 crs.)

Introduces the science of robotics from the perspective of artificial intelligence. Emphasizes various robot control architectures and their implementations using mobile robots. Topics include history of robotics; hierarchical, reactive, and hybrid architectures; Braitenberg vehicles; integration and calibration of sensors; construction techniques and considerations; and implementation of various types of behaviors. *Prerequisites: Completion of CSC 111 with a C or better and completion of CSC 220 with a C or better.*

CSC 493 - Selected Topics In Computer Science (4 crs.)

Presents topics that will vary according to need. Topics such as languages are appropriate.

CSC 501 - Algorithm Design and Analysis (3 crs.)

Examines various techniques for designing algorithms, analyzes and compares algorithms in terms of storage and computational complexity, and examines proof techniques for doing the analysis. Analysis of run-time growth of algorithms includes the growth classes O , Ω , Θ , ω , and o . Worst-case, best-case, and average-case analysis. Solving recurrences. Analysis of sorting algorithms. Design techniques to control growth including data structures, divide-and-conquer, dynamic programming, memorization, and greedy algorithms. Translation of real-world problems to graph problems and algorithms for graph problems including graph searches, topological sort, shortest path, and minimum spanning tree. *The classes P, NP, and proving a problem is NP-complete. Prerequisites: MAT 318, CSC 111.*

CSC 502 - Automata Theory (3 crs.)

Finite automata and regular languages, pushdown automata and context-free languages, Type of Turing machines. Proving the relative power of models, Chomsky hierarchy. Connection between languages and problems. Church-Turing Thesis, Inherent complexity of problems: undecidability, computational complexity, the classes P, NO, and NP-Complete intractable problems.

CSC 514 - Programming Languages (3 crs.)

A study of some programming languages that are significantly different from languages studies in the lower-division courses and,

which together with those languages, make a representative set of higher level programming languages. Types of languages to be studied include: list processing languages, string processing languages, procedural languages, process control languages, and very high level languages.

CSC 520 - Computer Architecture (3 crs.)

Introduction to computer architecture, operating systems, and communications. Topics include number and coding systems, overview of microprocessors, supporting chips, memory and memory interfacing, I/O design, timers, interrupts and interrupt processing, DMAs, video adapters, data communication, keyboard and printer interfacing, disk storage, TSRs, and bus architectures.

CSC 521 - Operating Systems (3 crs.)

Studies functionality of an operating system and design of efficient operating system components. Definition of a kernel and higher-level functions of operating systems, CSC scheduling algorithms. Interprocess communication including semaphores with busy-wait and idle-wait. Deadlock, the dining philosophers problem and starvation. Resource allocation. The bankers Algorithm. Virtual memory architectures. Introduction to distributed operating systems. *Prerequisite: CSC 520.*

CSC 523 - High Performance Computing (3 crs.)

Engages students in the high performance computing. In-depth coverage of techniques for the design and analysis of parallel algorithms and for programming these algorithms on parallel platforms. Covers the principles of parallel algorithm design and different parallel programming models with extensive coverage of MPI. A broad and balanced coverage of various core topics such as graph algorithms, data-mining algorithms, and a number of algorithms used in numerical and scientific computing applications. Hands-on programming experience using MPI on parallel computers. Real-world applications in this area will be discussed. *Prerequisite: CSC 521.*

CSC 534 - Computer Security (3 crs.)

Network is one of the fastest growing technologies today. In recent years, the need for education in computer security and related topics has grown dramatically and is essential. Explains how networks work and covers several topics in data communications and Internet protocols in order to discuss in-depth topics in security. Students will have a hands-on experience with these concepts. Legal and ethical issues related with security will be discussed. *Prerequisite: CSC 521.*

CSC 550 - Scientific Visualization (3 crs.)

Explores methods for representing and displaying large amounts of scientific data. Primary areas of study include: the human visual system; psychology of perception; algorithms for visualization; software tools; case studies in scientific disciplines. *Prerequisites: MAT 318, CSC 110, and CSC 111.*

CSC 570 - Database Management Systems (3 crs.)

Examines the theory and practical issues underlying the design, development, and use of a DBMS. Topics include characteristics well-designed databases; high-level representation of an application using ER modeling; functional dependency using ER modeling, functional dependency theory, normalization, and application toward a well-designed database; abstract query languages; query languages; concurrency; integrity; security. Advanced topics may be included. Students apply theory to practice in a number of projects involving design, creation, and use of a database.

CSC 571 - Advanced Databases (3 crs.)

A continuation of CSC 570, this course explores advanced topics in database systems. Topics to be addressed include object-relational and object-oriented data models; database security; Introductions to data warehousing and data mining; XML; non-traditional data storage (e.g., multimedia, spatial data); statistical databases, and statistical query language. *Prerequisite: CSC 570.*

CSC 592 - Advanced Topics in Computer Science (3 crs.)

Students will research an emerging topic in computer science. In addition to reading appropriate journal articles, students may develop empirical studies to evaluate the current theoretical results.

CSC 599 - Independent Study (3 crs.)

Students will research an emerging topic in computer science. In addition to reading appropriate journal articles, students may develop empirical studies to evaluate the current theoretical results.

ECH - Early Childhood

ECH 410 - Physical, Motor, and Sensory Development in Early Childhood (3 crs.)

Examines physical, motor, and sensory development of typically and atypically developing young children, birth through age eight years. Child health and wellness concerns included. Developmental information applied to best practices in early childhood education and early intervention settings. Field experiences are required.

ECH 415 - Professional Practicum in PK-4 (3 crs.)

This field-based course is for senior-level student participation in early childhood environments. Emphasis is placed on building partnerships with families and various community entities and implementing facets of an integrated curriculum. Instructor led seminars are scheduled throughout the course. Students will complete a total of at least 125 hours in a placement with students aged 3-9 years. *Prerequisites: ECH 210, ECH 220, ECH 260, ECH 320, and ECH 370. Must be taken concurrently with ECH 440 and ECH 453.*

ECH 440 - Building Family and Community Partnerships (3 crs.)

Emphasis is on understanding contemporary families with young children. Family diversity and fostering reciprocal relationships are stressed. Field experiences are required and will be completed in ECH 415. Field experiences include both observation of and participation in family/school/community interactions. *Prerequisites: ECH 210, ECH 220, ECH 260, ECH 320, ECH 370. Must be taken concurrently with ECH 415 and ECH 453.*

ECH 453 - Integrated Curriculum Pre K-4 (3 crs.)

Students will apply Pennsylvania standards for math, science, literacy, social studies, and the arts. Competencies will be practiced through projects, portfolio collections and demonstrations. *Prerequisites: ECH 210, ECH 220, ECH 253, ECH 260, ECH 320, ECH 333, ECH 343, ECH 370, ECH 373, ECH 393, RDG 323, RDG 363, and RDG 383. To be taken concurrently with ECH 415 and ECH 440.*

ECH 460 - Family School and Community Partnerships (3 crs.)

Surveys current and continuing issues in early childhood education. Includes child care, pre-primary programs and parent involvement, implementing a parent involvement project, and an individual study of a particular development area and/or processes. *Prerequisite: ECH 210, ECH 220, ECH 260 or ECH 320.*

ECH 462 - Practicum in Early Childhood Concentration with Administrative Field Experiences (3 crs.)

Provides a practicum experience with a director of an early childhood program and give students an opportunity to see a wide variety of administrative tasks. The focus of the course will be on developmentally appropriate practice and meeting the ethical standards as described by the National Association for the Education of Young Children. *Prerequisites: Completion of 90 credits as specified on degree plan (Gen. Ed. and at least 30 credits of Professional Core: ECH 210, ECH 220, ECH 253, ECH 260, ECH 320, ECH 333, ECH 343, ECH 370, ECH 373, ECH 393.*

ECH 470 - Language Development, Literacy, and Play in Early Childhood Education (3 crs.)

Preparation to understand the existing relationships among language development, early literacy development, and play behaviors in young children from birth through eight years. Application made to early childhood education and early intervention settings. Field experiences in an assigned practicum setting required. *Prerequisites: TCH 160, ECH 200, ECH 330, and senior status.*

ECH 480 - Early Childhood Professional Seminar (3 crs.)

Students in this course will demonstrate professional competencies in early childhood education student teaching placement. They will demonstrate their understanding of the value of and strategies for creating a community of learners. Practice of professional dispositions and behaviors in an inclusive setting will be refined. Guided field assignments will be required in ECH 489. *Must be taken concurrently with ECH 489.*

ECH 489 - Early Childhood Student Teaching (12)

This supervised, full-semester field-based experience is the culmination of the early childhood teacher preparation program. Early childhood teacher candidates are placed in pre-kindergarten, kindergarten, or first through fourth grade classrooms. Candidates will observe teachers, apply developmental theory and best educational practice, demonstrate dispositions for teaching, engage in ethical and effective professional practice to support the learning of all children. *Prerequisites: completion of all course requirements for the early childhood certification major. Must be taken concurrently with ECH 480.*

ECH 510 - Including Children with Special Needs in Early Childhood Education (3 crs.)

Presents current research about early childhood inclusion models and information about developing classroom-based services for young children with disabilities. Attention given to family-centered practice, collaboration with other disciplines, developmentally appropriate assessment, best practices for instruction, and preparing children for transition to new learning environments.

ECH 520 - Social and Emotional Development in Early Childhood (3 crs.)

Examines current research and theory about social and emotional development in young children, birth through eight years. Emphasis is on classroom practices, including instruction and discipline, which facilitate healthy social and emotional development in young children. Field experiences are required.

ECH 530 - Cognitive and Language Development in Early Childhood Education (3 crs.)

Examines current research and theory about cognitive and language development in young children, birth through eight years. Emphasis is on classroom practices, including instruction and

discipline, which facilitate cognitive and language development in young children. Field experiences are required.

ECH 540 - Families and Early Childhood Education (3 crs.)

Examines theory and research from the area of family studies. Emphasis is on characteristics of families with young children and how early childhood practitioners can best apply this information in their work settings. Field assignments are required.

ECH 563 - Leadership in Early Childhood Education (3 crs.)

Designed to prepare personnel to function in the role of administrator of early childhood programs. Examines types of early childhood programs and their underlying rationales, ways of establishing early childhood programs, methods of funding and financing programs, and considers the coordinating role of the administrator in working with other personnel. *Prerequisite: Permission of instructor.*

ECH 564 - The Business of Child Care (3 crs.)

Designed specifically for directors of child care centers seeking a director's credential from the Pennsylvania Keys to Professional Development with the Office of Child Development and Early Learning. Students will critically reflect on current business practices. Topics will include strategic planning, fiscal management, risk management, policy development, communication and conflict resolution, and grant writing.

ECH 565 - Health and Safety Practices in Early Childhood Educations: Program Development and Evaluation (3 crs.)

Stresses assessment of national health and safety standards for early childhood programs, as well as the development and evaluation of educational programs designed to improve the health and safety outcomes of young children and their families. Students will learn best practices in measuring program outcomes as a critical part of overall program evaluation. While the focus of this course is on health and safety, skills learned in developing a program outcome model will be directly applicable to overall program development and evaluation as funders are increasingly requesting outcome measurement as part of grant applications.

ECH 577 - Early Childhood Curriculum and Assessment (3 crs.)

Investigates contemporary curricular issues, model programs, and appropriate forms of assessment of young children. Curriculum, teaching strategies, and program organization and evaluation decisions are analyzed from the viewpoints of current theory and research.

ECO - Economics**ECO 484 - Mathematical Economics (3 crs.)**

Covers the specification of economic models in mathematical terms. Applications of mathematical analysis to both macroeconomic and microeconomic concepts are presented. *Prerequisites: ECO 101 and ECO 102; and MAT 181 or MAT 211.*

ECO 485 - Econometrics (3 crs.)

Covers statistical estimation and testing of economic models. Topics include specification of models, data problems, and estimation problems encountered in the study of economics, such as serial correlation, heteroscedasticity, autoregression, lag models, and identification. *Prerequisites: ECO 101 and ECO 102 or ECO 501; and MGS 226 or MGS 531.*

ECO 490 - Selected Topics in Economics (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

EDU - Education Foundation

EDU 410 - Environmental Education Practicum (3 crs.)

Opportunity to apply knowledge gained in previous courses and other experiences to a practical situation. Includes activities specifically designed to develop and evaluate skills needed to create a course of study for teaching environmental education in the elementary and secondary schools. An integral part is working with both elementary and secondary students in the application of both skills and knowledge. *Prerequisite: Approval of coordinator of environmental education.*

EDU 412 - Teaching Social Studies in Secondary Schools I (3 crs.)

Designed to acquaint the prospective teacher of social studies with the philosophy of the field, curriculum preparation and materials, and recent methods and techniques. Course outline, preparation of teaching units, testing, and visual aids are stressed. *Course must be taken concurrently with EDU 413.*

EDU 413 - Teaching of Social Studies II (3 crs.)

Explores the rationale for media use in education, provides an opportunity to develop audiovisual materials and become familiar with commercial materials to supplement teaching techniques and hands-on experiences with a variety of media equipment. Incorporates techniques of evaluation and testing through presentations and projects, which enhance student decision making to include these elements in classroom instructions. *Course must be taken concurrently with EDU 412.*

EDU 420 - Microcomputers in the Classroom (3 crs.)

Provides basic knowledge of evolution and operation of a microcomputer system. A variety of educational applications are reviewed and analyzed for instructional contributions. Using recommended evaluation procedures, software reviewed and discussed as to classroom utilization.

EDU 421 - Teaching of English in Secondary Schools (3 crs.)

Review of language arts requirements of secondary schools with special reference to grade placement and adaptation of materials, appraisal of results and the development of programs of study. Directed observation in the laboratory school is frequently employed.

EDU 422 - Methods of Teaching English in Secondary Schools (3 crs.)

Second half of methods block for secondary certification for English majors. Builds on EDU 290 and completes preparation for student teaching. Will learn how to apply many of the concepts of EDU 290 and will begin more specifically elements into practice. *Prerequisite: EDU 290.*

EDU 426 - Methods of Teaching Foreign Languages (3 crs.)

Focuses on techniques and materials for teaching foreign languages in the K-12 school setting. Theoretical rationales for a variety of methodologies and specific techniques examined along with the implications of findings from research in second language acquisition. Through a variety of strategies and experiences students develop those skills needed to begin a successful teaching career. *Prerequisite: Permission of instructor.*

EDU 429 - Methods of Teaching Business Subjects I (3 crs.)

Focuses on skills and knowledge needed by pre-service teachers as they learn to design instructional programs in the areas of business and computer education. Particular focus is on identification and selection of appropriate curriculum materials, methods of presenting information to diverse groups of students, and the

educational technology that supports the instructional program. Classroom management techniques, curriculum considerations, and strategies for teaching business subjects are stressed. *Must be taken concurrently with EDU 431.*

EDU 431 - Methods of Teaching Business Subjects II (3 crs.)

Focuses on topics of educational and psychological measurement and evaluation and their use by classroom teachers, curriculum supervisors, school system administrators, and educational researchers. Evaluation of student progress in a variety of educational settings is addressed. Case studies focusing on various aspects of teaching provide an opportunity for reflection on all aspects of classroom instruction. *Must be taken concurrently with EDU 429.*

EDU 434 - Teaching of Mathematics in the Secondary Schools I (3 crs.)

Covers theories of learning mathematics, national and state standards, and educational issues related to teaching and learning mathematics. Mathematical content and curricula for secondary school students will be explored and analyzed. Lesson and long-range planning and the classroom environment are included.

EDU 435 - Teaching of Mathematics in the Secondary Schools II (3 crs.)

Covers instructional and assessment strategies for secondary school mathematics classrooms. Differentiated instruction techniques, the use of student-centered approaches, and reading and writing connections are included. Students will participate in pre-student teaching clinical experiences. *Prerequisite: EDU 434.*

EDU 440 - Teaching of Science in Secondary Schools (3 crs.)

Students develop an instructional philosophy through discussions and reading as well as experience in simulated teaching activities. Use of demonstrations, experiments, visual aids, projects, cooperative learning, and other inquiry and discovery activities are stressed. Additional topics include individual differences among students, handicapped, or reading disabled. *Must be taken concurrently with EDU 441.*

EDU 441 - Curriculum and Evaluation in the Secondary Science Classroom (3 crs.)

Understanding of inter-relatedness between the life science, physical science, chemistry, and earth and space science curricula through reading, demonstrations, and visits to schools. Emphasis on relationships among learning objectives, teaching/learning activities, and the attainment of those objectives. Evaluation component includes construction of classroom rubrics, quizzes and tests, and the analysis and improvement of those assessment tools. *Must be taken concurrently with EDU 440.*

EDU 490 - Selected Topics in Education Foundation (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

EDU 495 - Student Teaching and Professional Practicum (9-15)

Professional site-based experience provides a full semester of guided teaching in the K-12 schools during which the student, under the direction of a qualified cooperating teacher and university supervisor, takes increasing responsibility for planning and directing the learning experience of a specific group(s) of students.

EDU 522 - Advanced Methods for the Teaching of World Languages (3 crs.)

Intended for K-12 in-service teachers who want to revitalize/upgrade their current classroom practices with research-based approaches in language teaching. Combines theory and

practice by encouraging participants to use research-based approaches to improve student FL learning. Although the course will not endorse a particular teaching method, the theoretical framework of the program will be based on the ACTFL Standards for the 21st Century. The course will also follow the ACTFL Standards for the Preparation of Foreign Language Teachers.

EEC - Special Education

EEC 411 - Introduction to Exceptionality (3 crs.)

Provides a background in the field of special education and the nature of exceptionality in children and youth. Emphasis on societal attitudes and practices in relation to persons with exceptionalities, current practices in identifying and classifying children and youth with exceptionalities, characteristics of all exceptional population groups, programmatic needs of individuals with exceptionalities, and issues and trends in the various fields that impact on diagnosis, classification, and programming or service delivery. The knowledge base comes out of social, cognitive, and developmental psychology, medical aspects of exceptionality, educational law and policy, and special education.

EEC 423 - Effective Instructional Strategies for Children with Exceptionalities (3 crs.)

Designed to prepare both general and special education teachers to effectively teach students with disabilities in general education settings. Emphasis given to utilizing evidence based instructional practices for students with varying disabilities, creating a positive learning environment, collaborating and communicating with other school personnel and parents, and implementing positive behavioral interventions. *Prerequisite: EEC 273 or EEC 411 or permission of the instructor.*

EEC 444 - Formal/Informal Assessment of Individuals with Exceptionalities (3 crs.)

Introduces a learning systems model for the educational evaluation of exceptional children. Tests of intelligence, language development, academic achievement, gross and fine motor skill, and social and emotional development are studied along with other data gathering techniques such as anecdotal records, behavior checklists, and parent interviews. Emphasis given to identification of those learning and behavior correlates essential in generating prescriptive programs for exceptional children. Class presentation includes lecture, discussion, films, demonstrations on videotape, and actual experience in administering and scoring selected tests. *Prerequisite: EEC 411 and EEC 475 or permission of the instructor.*

EEC 445 - Proactive Approaches for Classroom and Behavior Management (3 crs.)

Provides instruction and experience in individual and group aspects of classroom management. Provides instruction on proactive versus reactive interventions, defining and prioritizing behaviors, collecting and interpreting observational data, and methods for increasing desirable behaviors and decreasing undesirable behaviors. Discusses generalization and maintenance of behaviors, and self-management. Writing effective behavior management plans emphasized while focusing on ethical, legal, and proactive practices. *Prerequisite: EEC 273 or permission of the instructor.*

EEC 447 - Special Education Processes in a Standards Aligned System (3 crs.)

An advanced study in planning and delivering instructional content to students with disabilities in a standards aligned system. The course will focus on: 1) the major principles of IDEA emphasizing evaluation, identification, and writing legally correct Evaluation

Reports (ER) and Individualized Education Programs (IEP), 2) the principles of Least Restrictive Environment, Due Process, and Parent Involvement, (3 crs.) Behavior management of students with disabilities. *Prerequisite: EEC 273 or permission of instructor.*

EEC 475 - Inclusive Education: A Practical Approach for Educators (3 crs.)

Designed to prepare both general and special education teachers to effectively teach students with disabilities in general education settings. Practical guidelines, strategies, methods, adaptations, and materials, including definition, standards, classroom organization/management, and collaborative consultation emphasized to meet the academic, social, and affective needs of students with disabilities in inclusive settings. *Prerequisite: EEC 411 or permission of instructor.*

EEC 483 - Assessing Children with Exceptionalities for Curricular Decision-Making (3 crs.)

Designed to provide teacher candidates with a comprehensive overview of the skills, processes, and research-based interventions for linking assessment and instructional decision-making in inclusive settings for students with disabilities. The academic core areas of literacy, writing, math, and behavior will focus on preparing candidates to participate in pre-referral data collection, contribution to the identification of students with disabilities, IEP writing, progress monitoring, and curriculum based assessment. *Prerequisite: EEC 273 or EEC 411 or permission of instructor.*

EEC 490 - Selected Topics in Special Education (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

EEC 525 - Technology: Instructional, Assistive, Universal Design to Support Academics (3 crs.)

Designed to teach educators how to integrate technology into instruction to support achievement in general and special education classes, specifically to support reading, mathematics, and writing achievement. Focuses on the use of technology for universal design for learning and using assistive technology with students with disabilities. *Prerequisite: EEC 273 or EEC 411 or permission of instructor.*

EEC 526 - Topics in Spec Ed for School Counselors and other School Professionals: Working w/ Stud with Except (3 crs.)

Provides a background in the field of special education and the nature of exceptionality in children and youth. Emphasis on societal attitudes and practices in relation to persons with exceptionalities, current practices in identifying and classifying children and youth with exceptionalities, characteristics of all exceptional population groups, programmatic needs of individuals with exceptionalities, and issues and trends in the various fields that impact on diagnosis, classification, and programming or service delivery. The knowledge base comes out of social, cognitive, and developmental psychology, medical aspects of exceptionality, educational law and policy, and special education.

EEC 535 - Special Education Processes in a Standards Aligned System (3 crs.)

An advanced study in the legal requirements for the planning and delivering instructional content to students with disabilities. The course will focus on the six major principles of IDEA. Specifically, the course will address evaluation, identification, and writing legally correct Evaluation Reports (ER) and Individualized Education Programs (IEPs), the principles of Least Restrictive Environment, Due Process, Parent Involvement. *Prerequisite: EEC 273 or permission of the instructor.*

EEC 543 - Selected Studies in Special Education (1-3 crs.)

Opportunity for qualified students to pursue selected studies in areas of special interest such as preparation and development of new curriculum materials, investigations leading to a greater knowledge of procedures for teaching, and the survey and analysis of current practices in the organization and the curriculum of the special education program. *Prerequisites: Six graduate credits in special education and approval of department chair.*

EEC 545 - Applied Behavior Analysis/Positive Behavior Supports (3 crs.)

An advanced study in using proactive approaches in classroom and behavior management for students with disabilities while emphasizing Applied Behavior Analysis (ABA), Functional Behavior Assessment (FBA), and Behavior Intervention Plans (BIPs). The main focus of the course is on 1) teaching proactive approaches, 2) teaching and implementing Applied Behavior Analysis, 3) Conducting a Functional Behavior Assessment, and 3) Writing and Implementing an effective Behavior Intervention Plan using the principles of Applied Behavior Analysis. *Prerequisite: EEC 273 or permission of instructor.*

EEC 546 - Transition to Adult Life for Students with Disabilities (3 crs.)

Information about the pre-vocational and vocational training of adolescents and young adults who have mental retardation, learning disabilities, or behavior disorders. Provides an understanding of curriculum developments, methods, materials and teaching techniques utilized in the development of skills and attitudes essential to success in the world of work.

EEC 548 - Direct Instruction (3 crs.)

Covers carefully sequenced, highly prescriptive teacher directed procedures for teaching decoding, comprehension, content, and study skills. Rather than merely list ways to teach skills, direct instruction method discusses when a skill should be taught, what examples to teach, how to correct errors, and the relationship among different reading skills. *Prerequisite: EEC 411 or permission of instructor.*

EEC 550 - Instruction for Students with High Incidence Disabilities (3 crs.)

Provides a study of historical, empirical, and research findings, forces, and factors making up the fundamental structure of the field of learning disabilities. Topics include: causes of learning disorders, characteristics of individuals with learning deficits, models of learning dysfunctions, and perceptual-conceptual learning processes and cerebral components. Additionally, the discussion will include the use of dietary, medical, and physiological intervention techniques, administrative programming and parental concerns and responsibilities. New topics and new areas will be included as they are noted in the research literature. Methods of presentation will be basically lecture and discussion. Field experiences required. *Prerequisite: EEC 273 or EEC 411 or permission of instructor.*

EEC 551 - Subject Area Content Access for Students with Learning Disabilities in a Standards Aligned System (3 crs.)

Advanced course in the field of learning disabilities across the life span; from early childhood to adulthood. Designed to familiarize students with how to teach students with learning disabilities in reading, writing, spelling, math, social studies, science, and social skills by developing research based interventions supported by assessment data. Designed to help students become critical thinkers, creative and expert planners, and effective practitioners,

and to work in a standards aligned system. Field experiences required. *Prerequisite: EEC 273 or permission of instructor.*

EEC 561 - Instruction for Students with Low Incidence Disabilities (3 crs.)

An advanced study of educational strategies and materials used with people who have low incidence disabilities. Explores instructional strategies and programming for individuals who have significant impairment in intellectual functioning and adaptive behaviors. Adapting instructional strategies and materials to meet the unique needs of people with low incidence disabilities is also stressed. Education for independent functioning in self-care, social, and daily living skills is emphasized. *Prerequisite: EEC 273 or permission of instructor.*

EEC 565 - Instruction for Students with Autism Spectrum Disorders (3 crs.)

An advanced study of educational strategies and materials used with people who have autism spectrum disorders (ASDs). Introductory material will include learner characteristics and screening techniques. Explores instructional strategies and programming for individuals who have significant deficits in social communication and interactions; restricted, repetitive patterns of behavior, interests, and activities; and whose symptoms presented in early childhood. Current theories about etiology will be explored and analyzed. Intervention approaches will be described and analyzed. Field experiences are required.

EEC 570 - Foundations, Proactive Approaches, and Management of Students w/ Emotional and/or Behavioral Disorders (3 crs.)

A foundation course that explores the historical and current philosophical models and approaches in the field of behavior disorders including definitions, characteristics, assessment approaches, educational, mental health, and the inter-disciplinary process for working with children and youth. Predominant theoretical models, significant educators/theorists, major disorders, and interventions are identified, discussed, applied, and synthesized relative to their influence on the educational system in meeting the diverse needs of children with emotional or behavioral problems and their families. Contemporary issues and trends examined to understand the social, behavioral, and emotional problems of children and youth. *Prerequisite: EEC 273 or EEC 411 or permission of instructor.*

EEC 571 - Instruction for Students with Social, Emotional, and Behavior Disorders (3 crs.)

A methods course that focuses on the development of appropriate curriculum and strategies based on individual needs, practical application and methods, and assessment. Students will have a field experience working with students with behavior disorders, their teachers, or their families at the elementary, middle, secondary level or in alternative settings. Specific emphasis is placed on what educators can do to promote learning for students with behavior disorders. These include initial planning and organization, assessment, selection and modification of curriculum, communication with others, and positive behavior management programs. Emphasizes teaching social skills and appropriate curriculum as an integrated strategy using current and best practices. Field experiences required. *Prerequisite: EEC 273 or permission of instructor.*

EEC 590 - Practicum I in Special Education (3 crs.)

Designed to extend student's professional preparation beyond resources of the college to include resources of the community and region. Practicum is intended to permit graduate student to engage

in supervised professional activities in selected cooperating community agencies, local education agencies, or intermediate units. *Prerequisites: EEC 525, EEC 551, EEC 561, and EEC 571.*

EEC 591 - Practicum II in Special Education (3 crs.)

Supervised intensive field experience designed to provide the candidate for certification in special education with field experiences in assessment techniques, special class operation, participating in child study teams, and curriculum development. *Prerequisite: permission of instructor.*

EEC 594 - Selected Topics in Special Education (1-3 crs.)

Opportunity for the department to offer courses in areas of major interests not covered by regular course offerings.

EEC 599 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

EEC 600 - Research in Special Education (3 crs.)

Research in Special Education examines methods used in conducting research with students with disabilities. Emphasis is placed on understanding and interpreting data to improve instructional interventions. Methods examined may include quantitative, qualitative, and single-subject methodology. *Prerequisites: Special Education majors or permission of the instructor.*

EEC 609 - Internship (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

ELP - Educational Leader Policy

ELP 490 - Selected Topics in Educational Leadership and Policy (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

ELP 500 - General School Administration (3 crs.)

Introductory study of the organization and administration of American public education for persons interested in pursuing a professional career in educational administration. A basic understanding of educational leadership is developed through an integration of theory, knowledge, and actual practice. Course is designed for teachers, school board members, and other interested lay citizens who wish to know more about educational administration.

ELP 510 - Special Education Law (3 crs.)

Provides a comprehensive and current overview of the major federal laws and judicial interpretations of those laws that apply to the education of children with disabilities. Course includes discussions of inclusion, effective accommodations, IEPs, discipline, equal protection, and procedural due process. It also examines the six principles of the Individuals with Disabilities Act and Chapters 14, 15, and 16 of the Pennsylvania School Code. Course helps students understand what the law requires so that they will become effective educational leaders capable of making appropriate decisions that comply with these laws.

ELP 514 - Practicum I Leadership Field Experiences at the Building Level (3 crs.)

Provides an initial exploration and exposure to leadership roles at the building setting within the school environment and should be taken as part of candidate's Tier 1 cluster of courses at beginning of

program of study. Candidates expected to log 180 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by mentor, and conducting a case study on leadership concepts. In addition, candidate will participate in three leadership seminars that focus on leadership foundations and best practices as articulated by current leaders in field and a basic action research activity. Candidates begin to explore role of the principal/supervisor as an agent of change and/or reform.

ELP 515 - The Role of Research and Data Informed Decision-Making for School Leaders (3 crs.)

Designed to provide school administrators with the knowledge and skills necessary to be intelligent consumers and practitioners of research. Research designs, methods, and results are important tools for leadership and decision-making; administrators should be able to evaluate research studies and implement the findings. Requirements of federal legislation necessitates leadership that is, in part, derived from data-based decision making. Additionally, there may be situations in which an administrator is responsible for constructing a research proposal to qualify for a grant or to lead change in an educational program.

ELP 516 - Curriculum Assessment and Instructional PK-12 for Diverse Student Populations (3 crs.)

Focuses on curriculum development, implementation, and assessment (through instructional practice in U.S. public schools). Designed for both future school leaders and central office administrators, students will study curriculum from the foundation of three bases: (1) social forces, (2) theories of human development, and (3) the nature of learning and learning styles. Bases will assist students in defining curriculum by helping them understand key issues from both an historical perspective and current thinking. Useful for individuals aspiring to be (or already serving as) principals, supervisors, counseling personnel, subject area specialists, and superintendents. Emphasis placed on approaches to developing, evaluating, and articulating curricular changes drawn from a wide variety of subject areas. As a result students will be knowledgeable of the fundamentals of curriculum; the connection between curriculum, instruction, and assessment; current curricular issues; innovative approaches to curricula; planning curricular strategies; and analyzing current curricula.

ELP 517 - Leadership in Technology and Effective Program Delivery (3 crs.)

Designed to provide future school administrators with the requisite skill sets and conceptual knowledge needed for effective 21st century leadership. Understanding technology as a tool for learning, managing, analyzing, communicating, and collaborating is integral to successful school leadership at the classroom, building, and central office levels. Topics explored include technology integration, digital citizenship, use of technology in systemic organizational improvement, professional growth, digital culture, and visionary leadership. In addition to developing personal philosophies regarding use of technology in teaching, learning, and leading, each student will develop a personal portfolio of resources.

ELP 518 - The Role of Supervision in Promoting Student Achievement (3 crs.)

Designed for educational leaders, whether they are practicing administrators, subject-area supervisors, department chairpersons, cooperating teachers, or mentors. Principal thrust is to facilitate the formulation and implementation of a teacher evaluation and supervision system—based on data-driven and researched-based strategies and practical skills, and supported by law—that promotes

enhanced student learning and quality teaching. Treats supervision and evaluation as two separate but complementary functions that should be integrated into a coherent system that provides differentiated opportunities for teacher growth and evidence-based quality assurance. Assists in developing the research-base, practical skills, and necessary dispositions to meet the needs of all teachers, regardless of their current career stage or level of performance. Many class meetings are work sessions that focus on learning and refining the skills necessary to evaluate the instructional act and to support the professional growth of teachers and will include individual and group activities in a supportive environment where participants actively engage in and reflect upon their conceptual understanding and skill development relative to evaluation and supervision.

ELP 519 - Advanced Leadership and the School Principal PK-12 (3 crs.)

Introduces future educational leaders to school level administration. Focusing on the multi-faceted roles of a school leader, students will study the principal through the lens of the principal as a learner, mentor, instructional leader, supervisor, manager, politician, advocate, and innovator. Combining theory with practice, students will obtain a deeper understanding of the complexity of leadership at the building level.

ELP 520 - School Finance and Student Learning (3 crs.)

Developed to provide aspiring and practicing elementary and secondary building administrators and supervisors with knowledge necessary to understand and manage department and building-level financial responsibilities by addressing resource management and fiscal issues that affect funding and programming at the building level. Among topics considered are historical perspectives on school finance, current financial issues, trends, and the practical aspects of budget development.

ELP 521 - Legal and Ethical Issues that Impact on Student Learning (3 crs.)

Focuses on the legal foundations for the establishment and operation of public schools in the United States and Pennsylvania in particular. Assists students in understanding key issues that impact on student learning from both an historical and current perspective. Students should be knowledgeable in all important aspects of school law from basic rights of individuals to the legal requirements for designing and maintaining appropriate school environments for learning. In addition to a review of landmark cases and current issues, students will also study laws and topics specific to building level leadership in Pennsylvania.

ELP 522 - Practicum II Advanced Leadership Field Experiences at the Building Level (3 crs.)

Designed as a capstone experience, this practicum provides candidates with the opportunity to assess, develop, and refine knowledge, skills and dispositions acquired as a part of their programs of study. Major focus is on instructional leadership, improving student learning, evidence based decision making, and the role of the building leader as an agent of reform. Candidates expected to log 180 hours of practical field experiences plus complete a major instructional leadership project and a second action research project. Candidate will participate in three leadership seminars that will focus on their platform of beliefs, professional development plans, and future Act 45 requirements.

ELP 569 - Seminar: Diversity in Education (3 crs.)

Increases the awareness of administrators, educators, and related school personnel to the problems, challenges, and issues faced by

various cultural minority students as they strive to become incorporated in their respective schools within the mainstream of American society. Stresses the various strategies, methods, and techniques educators need to know to write and execute administrative policies and practices and to design and implement curriculum and teaching strategies that reflect the ethnic diversity and cultural minorities found within their respective buildings and school districts. Emphasis placed on the Black and Hispanic populations.

ELP 580 - Statistical Methods in Education (3 crs.)

Designed to enable the student to interpret the scientific literature in education and psychology and to make the computations involved in the use of tests and original investigations that require statistical technique. Measures of central tendency, variability, and correlations are included.

ELP 594 - Selected Topics in Education Leadership and Policy (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

ELP 619 - Leadership for Pupil Services (3 crs.)

Designed for students in administrator certification programs who want to develop skills necessary to provide leadership for pupil services programs in school organizations. Areas of focus include: organization and development of pupil services, team approaches for meeting individual student needs in inclusive learning environments, underlying assumptions of pupil services programs, supervision and staffing, financing, and crisis prevention and response management. Attention will be given to roles of building principals and central office staff in pupil services programs. Community support systems will be addressed with regard to the manner in which they provide assistance to and interact with students, parents, and schools (e.g., juvenile justice, public health, mental health, social services, employers).

ELP 620 - Thesis (3 crs.)

Elective course offered within the master's program in elementary/middle or middle/secondary administration. Students enrolled in ELP600 Research for School Administrators select a committee, a chair, and complete the proposal (the first three chapters of the thesis), including human subjects review. During ELP620 Thesis, student defends the proposal begun in ELP600, gathers data, completes the writing of the thesis, and defends completed thesis. For students with an interest in research and those who expect to pursue a doctorate.

ELP 621 - Practicum I Strategic Leadership in District Governance (3 crs.)

Provides an initial exploration and exposure to leadership roles at the district setting and should be taken as part of a candidate's Tier 1 cluster of courses at beginning of program of study. Candidates expected to log 180 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by mentor and conducting a case study on leadership concepts. Candidate will participate in three leadership seminars that focus on leadership foundations and best practices as articulated by current leaders in the field and a basic action research activity. Candidate will also begin to explore the role of the superintendent as an agent of change and/or reform. Projects and activities from Practicum I may carry over into Practicum II.

ELP 621R - Residency: Strategic Leadership in District Governance (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting which focus on Governance and School Community Relations. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ELP 622 - The Superintendent as a School and Community Leader (3 crs.)

Viewing the school as a dynamic cultural entity interacting with external supra-systems, the school's interdependency on the community and its many publics is assessed. Importance of a sound public relations program for the school, and need to communicate and understand the community is stressed. Student designs a program to enhance effective lines of communication between the school and its publics.

ELP 623 - Negotiations and Personnel Strategic Decision Making (3 crs.)

Designed to prepare school leaders for leadership in the area of human resources in public schools. Includes a comprehensive review of the personnel function from the perspective of district central office administration and the theories and best practices in staff recruitment, selection, assignment, orientation, evaluation, professional development, reduction in force and other relevant current issues. Explores negotiations concepts, strategies and regulations, and other legal considerations within the commonwealth of Pennsylvania. Core field experiences form the basis of the exploration and development of critical skills necessary to be successful in the areas covered within the course to include the integration of institutional standards as they apply to all topics.

ELP 623R - Residency: Negotiations and Personnel Strategic Decision Making (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting that focus on negotiating strategies and human resource issues that influence school district effectiveness. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ELP 624 - Ethical and Legal Decision-making at the District Level (3 crs.)

Designed for preparing for executive leadership positions in public education. Students expected to have background in public school law and some experiences in leading public schools at either the

building and/or district levels. Focuses on a review of key areas of school law with advanced study in the legal areas that are currently challenging school leaders. State laws affecting public education will be studied in detail along with issues dealing with student rights, the role of the school board, laws specific to the roles of school leaders, parent and community issues, emerging special education challenges, and laws dealing with business and finance.

ELP 624R - Residency: Ethical and Legal Decision-making at the District Level (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting that focus on Legal and Ethical Issues that face School Leaders. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ELP 625 - The Impact of Facilities and Plant Management Decisions on School Effectiveness (3 crs.)

Designed for students in the Superintendent's Letter of Eligibility Program and for practicing educational administrators who want to update skills in educational facilities and plant management. Related educational program to facilities planning and development; provides an opportunity for students to interact with professionals from a variety of disciplines related to planning and development of educational facilities, relates local planning to Pennsylvania Department of Education requirements and regulations; and provides field-based work in contemporary facility planning, development, and maintenance.

ELP 625R - Residency: The Impact of Facilities and Plant Management Decisions on School Effectiveness (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting that focus on developing, managing and designing school district facilities to provide effective learning environments. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ELP 626 - Optimizing Financial Resources to Support District Level Achievement (3 crs.)

Project-driven course focuses on the changing perception of finance in the American public schools (K-12). Assists in creating a platform of beliefs about school finance, budgeting, and the role of the superintendent by helping them understand key issues from both a historical perspective and current thinking on what it should become. Emphasis on approaches to developing, evaluating, and articulating financial planning strategies to staff, the public, and the

school board that inform decisions about student achievement. Also discusses the relationship between school boards and superintendents specific to budget development and strategies for enhancing that relationship.

ELP 626R - Residency: Optimizing Financial Resources to Support District Level Achievement (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting that focus on financial and budgeting issues that can influence student achievement. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor, and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ELP 627 - Practicum II Strategic Instructional Leadership (3 crs.)

Provides an advanced exploration and exposure to leadership roles at the district setting and should be taken as part of a candidate's Tier 3 cluster of courses at end of program of study. Candidates expected to log 180 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for instructional leadership activities as assigned by mentor, and conducting a case study on instructional leadership concepts. In addition, the candidate will participate in three leadership seminars that will focus on instructional leadership foundations and best practices as articulated by current leaders in the field. Candidate will also begin to explore the role of superintendent as an agent of change and/or reform. Projects and activities from Practicum I may carry over into Practicum II.

ELP 627R - Residency: Instructional and Technology Leadership at the Executive Level (4 crs.)

Restricted to students enrolled in the Leadership Residency Program and provides an initial exploration and exposure to leadership roles at the district setting that focus on Instructional and Technology Leadership Issues. Candidates will be expected to log 90-120 hours of practical field experiences to include, but not limited to, shadowing school leaders, observing other educators, assuming responsibility for basic leadership activities as assigned by his/her mentor and conducting a case study on leadership concepts. In addition, the candidate will participate in leadership seminars that will focus on leadership foundations and best practices in the course focus areas as articulated by current leaders in the field and conduct a basic action research activity. The candidate will also begin to explore the role of the superintendent/IU Director as an agent of change and/or reform.

ENG - English

ENG 420 - Studies in Writing (3 crs.)

Provides in-depth study of the history, theory, and/or teaching of writing. Content varies by instructor. Featured topics may include rhetorical theory and history, writing pedagogy, or politics and practices of literacy. Expect to produce at least twenty pages of

writing in a combination of shorter and longer assignments, including an analytical paper.

ENG 426 - Teaching Adolescent Literature (3 crs.)

Acquaints secondary English pre-service teachers with award-winning literature and teaching resources to use with adolescents in grades 7-12. Includes examination of the psychological and developmental needs of the adolescent; how to accommodate variety of student abilities and interests within a classroom; and how to incorporate adolescent literature in the secondary English curriculum. Representative authors include Blume, Hinton, Cormier, Lowry, and Paterson. Expect to write at least one analytical paper and develop materials for instructional purposes. *Prerequisite: EDU 290.*

ENG 427 - Advanced Poetry Workshop (3 crs.)

Provides the opportunity for advanced students to develop their abilities to write original, publishable poetry with special emphasis on the development of a significant body of work. Taught as a workshop; individual tutorials will also be arranged for student writers. In-depth readings and lectures will cover recent developments, both theoretical and practical, in the poetry field. Each student should expect to write and revise at least fifteen pages of poetry, and to produce a final portfolio of coursework. *Prerequisite: ENG 307 or permission of instructor.*

ENG 428 - Advanced Fiction Workshop (3 crs.)

Provides opportunity for advanced students to develop their abilities to write original, publishable fiction with special emphasis on the development of a significant body of work. Taught as a workshop; individual tutorials will also be arranged for student writers. In-depth readings and lectures will cover recent developments, both theoretical and practical, in prose genres including short fiction and the novel. Each student should expect to write and revise at least two or more short works of fiction, or chapters of a novel, and to produce a final portfolio. *Prerequisite: ENG 308 or permission of instructor.*

ENG 438 - Technical Professional Writing II (3 crs.)

Incorporate theories of technical and professional communication into writing practice. Students use argumentative rhetorical strategies, analyze audience needs, and consider ethical implications as they prepare advanced projects in technical writing. Emphasizes critical evaluation of information, project design and implementation, and organizational skills for collaborative projects. Students complete advanced assignments, such as writing a grant proposal, creating online user documentation, preparing a research report in a hyperlinked format, and making a persuasive presentation using computer-generated graphics. Serves as preparation for an internship in technical or professional writing; and a significant asset for students whose employment goals require strong writing skills and the ability to lead and to coordinate projects. *Prerequisite: ENG238.*

ENG 464 - Seminar in a Major Author (3 crs.)

In-depth analysis of representative works by a single author and familiarizes students with relevant secondary sources associated with the author. Particular author varies according to the instructor. Expect to write at least one lengthy documented paper dealing with works covered in the class. *Prerequisite: ENG 107 or permission of the department.*

ENG 465 - Seminar in Creative Nonfiction (3 crs.)

Examines prose that claims to be a factual representation of the truth in a narrative form. Genres that may be studied include autobiography, memoir, biography, history, documentary writing,

essay, travel writing, nature writing, and writing about culture. Works by more than one author will be read; may emphasize determining characteristics of the genre rather than the chronological period in which it appears. Expect to write at least one lengthy analytic paper. *Prerequisite: ENG 107 or permission of the department.*

ENG 466 - Seminar in Literary Theory (3 crs.)

In-depth study of one or more theoretical perspectives in literary criticism. Particular theories and authors studied vary according to the instructor. May focus on a theoretical movement (e.g., deconstruction, reader-response) or the works of one or more important theorists (e.g., Fredric Jameson, Stanley Fish). May also be organized around a particular set of issues or concerns relevant to theories of literary criticism (e.g., race in postmodern theory, the meaning of the author in literary theory). Expect to write at least one lengthy analytic paper. The course meets the department's criticism requirement. *Prerequisite: ENG 107 or permission of the department.*

ENG 467 - Seminar in Drama (3 crs.)

Examines drama's fundamental components plot, character, and what Aristotle calls thought (every effect produced in speech) within the spatial context of a stage. Concerned, in particular, with performance of drama. Attendance at relevant area stage performances and viewing films and videotapes augment textual study. Requires thoughtful critical reading and critical writing beyond requirements of lower level courses. Both activities done in terms of a non-chronological cluster of significant dramatists, e.g., Marlowe, Ibsen, O'Neill, which may vary from instructor to instructor. Enables students to understand in-depth the components of drama and their various utilizations regardless of a dramatist's time period or individual style. Expect to write at least one lengthy analytic paper dealing with one or more of the components in a work or works read for the seminar. *Prerequisite: ENG 107 or permission of the department.*

ENG 468 - Seminar in Fiction (3 crs.)

Examines fiction's fundamental components plot, character, and narrative point-of-view. Requires thoughtful critical reading and critical writing beyond requirements of lower level courses. Both activities done in terms of non-chronological cluster of significant fiction writers, e.g., Sterne, Bronte, Faulkner, which may vary from instructor to instructor. Enables students to understand in-depth the components of fiction and their various utilizations, regardless of a fiction writer's time period or individual style. Expect to write at least one lengthy analytic paper dealing with one or more of the components in a work or works read for the seminar. *Prerequisite: ENG 107 or permission of the department.*

ENG 469 - Seminar in Poetry (3 crs.)

Examines poetry's fundamental components image, sound, and the interplay of concepts. Requires thoughtful critical reading and critical writing beyond requirements of lower level courses. Both activities done in terms of a non-chronological cluster of significant poets, e.g., Milton, Tennyson, Moore, which may vary from instructor to instructor. Enables students to understand in-depth the components and their various utilizations, regardless of a poet's time period or individual style. Expect to write at least one lengthy analytic paper dealing with one or more of the components in a work or works read for the seminar. *Prerequisite: ENG 107 or permission of the department.*

ENG 490 - Selected Topics in English (1-3 crs.)

Opportunity to offer courses in areas of departmental interest not covered by regular course offerings. *Prerequisite: ENG 107*

ENG 511 - Seminar in Cultural Studies (3 crs.)

Examines textual media (literature, film, etc.) in relation to other cultural practices and to social and historical structures. Might involve, for example, studies of film noir in relation to the postwar anticommunist hysteria; race in Renaissance literature and the rise of colonialist economy; gay "camp" style, postmodern poetics, and performance art. Introduces students to important theories and methodologies of cultural study and relates them to study of literary texts. One or more critical papers required. Specific content varies according to instructor.

ENG 518 - Seminar in Multicultural Literature (3 crs.)

Provides in-service teachers and certification students with advanced study of American literature in a multicultural context. At least two historically under-represented social groups will be represented by the authors studied. Course may focus on a genre (e.g. minority American poetry), a historical period (e.g. minority American literature in the postbellum, Native American, and Chicano poetry of the Vietnam era), and/or a thematic concern. Helps teachers understand current critical and theoretical approaches to the cultural diversity of American literature. Specific topic will vary according to instructor.

ENG 525 - Seminar in Teaching English/Language Arts (3 crs.)

Provides in-service teachers and certification students with current research and methodology for teaching the English/language arts. Course gives students the opportunity to explore topics such as the student-centered literature class, theories of the reader-response criticism as they apply to the classroom, incarnations of the writing process, reading/writing workshop, trends in assessment, technology in the English classroom, and other subjects as appropriate.

ESS - Earth Science

ESS 404 - Applied Meteorology and Climatology (3 crs.)

Intensive study of interaction between various atmospheric parameters and the natural or human-modified surfaces of the earth centered on the applied nature of the atmosphere including discussion of urban, human, agricultural, architectural, and commercial aspects of society. Computer simulations and mapping are utilized to enhance understanding. Each student carries out a field study on a particular problem of atmospheric interest. *Prerequisite: ESS 111 or ESS 355.*

ESS 413 - Mineral and Rock Resources (3 crs.)

Deals with metallic ore deposits such as iron, ferroalloys and nonferrous metals, mineral fuels, and other selected minerals of economic significance. Emphasis on geologic occurrence and mode of origin, geographical distribution, and importance to humans. *Prerequisite: ESS 110 or ESS 210*

ESS 442 - Environmental Geology (3 crs.)

Deals with relationships between man and the geological habitat. Concerned with problems people have in using the earth and the reaction of the earth to that use in both a rural and urban setting. Stress placed on developing problem-solving skills in collecting, recording, and interpreting data through field investigations and simulation techniques. *Prerequisite: ESS 110 or ESS 210.*

ESS 490 - Selected Topics in Earth Science (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

ESS 594 - Selected Topics in Earth Science (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

ESS 599 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

FIN - Finance**FIN 405 - Real Estate Appraisal and Investment Analysis (3 crs.)**

Provides understanding of the techniques, risks, and rewards associated with various ways of investing and financing both residential and commercial real estate. Topical coverage includes investing, financing, appraising, consulting, and managing real estate. *Prerequisite: FIN 311 or permission of department chair.*

FIN 414 - Bank Management (3 crs.)

Deals with the regulatory and managerial environment within which the bank manager operates. Concerned with the regulatory framework that controls the balance sheet policies of a bank as well as branching and merger activity. Other selected advanced topics of bank management, such as the management of deposits and capital adequacy, the bank's balance sheet, assets, and liquidity, are addressed. *Prerequisite: FIN 314 or permission of department chair.*

FIN 421 - Personal Financial Planning (3 crs.)

Capstone synthesis course for Personal Financial Planning majors. Requires students to apply information and skills learned in business core and personal financial planning courses to case situations. Includes the financial planning process, personal financial statements, cash flow and debt management, analysis of insurance needs, investment planning, as well as estate, retirement, and income tax planning. Designed to apply and integrate the above knowledge into a cohesive personal financial plan. *Prerequisites: FIN 312, FIN 320, FIN 322, FIN 324, and ACC 306. Can be concurrent.*

FIN 425 - Global Financial Management (3 crs.)

Studies the international environment, the foreign exchange risk management, the investment decision, the financing decision, and management of ongoing business operations in global settings. Emphasis on the analysis and evaluation of the investment decision, financial decision, and operational and financial risk in foreign countries. *Prerequisite: FIN 311 and SCM 200 or permission of department chair.*

FIN 434 - Investment Management Program (1-3 crs.)

Students manage a real money security portfolio to obtain practical investing experience. Students establish investment philosophy, investment objectives and policies, identify investment strategies, and present recommendations for buying and selling investment securities toward the goal of constructing and managing a real portfolio. *Prerequisites: FIN 333 and departmental approval.*

FIN 442 - Derivatives Markets (3 crs.)

Broad overview of different types of financial derivatives (forwards, futures, options, options on futures, and swaps), while focusing on the principles that determine market prices. To integrate the understanding of these instruments, the discussion emphasizes the relationships among futures, options, and swaps. Emphasizes the

application of financial derivatives as risk management tools, not as instruments of speculation. *Prerequisite: FIN 312 or permission of department chair.*

FIN 490 - Selected Topics in Finance (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

FRN - French**FRN 400 - Seminar: Advanced Studies in French Language and Literature (3 crs.)**

Detailed examination of specific aspects of French literature authors, genres, literary and philosophic schools, or linguistic problems such as translation and dialects. Seminar may be taken more than once provided a specific topic is not repeated. *Prerequisite: permission of instructor.*

FRN 411 - Theory and Practice of Translation (3 crs.)

Introduces various types and tools of oral and written translation and provides extensive practice in French-to-English translating in professional contexts (business, education, criminal justice, medicine, computer science, international relations and political science) and in translating works of literature. Emphasis will be given to discussion of translation problems, recognition of appropriate solutions, and the use of specific translation strategies in French-to-English translation. *Prerequisites: FRN 309 and FRN 316.*

FRN 490 - Selected Topics in French (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

FRN 510 - French Theater (3 crs.)

Intends to help in understanding the complexity of the theater in the French speaking throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature, and the social influences that have impacted it. Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in French.

FRN 515 - French Poetry (3 crs.)

Intends to help in understanding the complexity of poetry in the French speaking throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature, and the social influences that have impacted it. Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in French.

FRN 520 - French Fiction (3 crs.)

Intends to help in understanding the complexity of fiction in French speaking throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature, and the social influences that have impacted it. Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in French.

FRN 525 - French Speaking Countries (3 crs.)

Intends to expose students to the complexity of the cultures in French-speaking countries throughout the centuries through a multidisciplinary approach. Studies the importance of different cultural issues from a political, historical, and sociological

standpoint, exploring the impact on the diverse cultures of the French-speaking world. Analyzes different texts and films to illustrate these issues. Taught in French.

FRN 530 - French Linguistics (3 crs.)

Deals with the grammatical structure of the modern French languages and addresses issues relating to phonetics, syntax, morphology, and semantics, all part of what is commonly referred to as grammar. Lectures grounded in practicality and consider the needs of teachers. Prescriptive norms and actual use of the language in its dialectal variations, including those found in Canada, Africa, and the Middle East will be studied. Practicality further emphasized with sociolinguistic considerations that will enhance understanding of the language.

FRN 535 - History of French Language (3 crs.)

Seminar course lets students travel both in time and in space, while considering the evolution of the French language. Starting with Latin, changes systematically studied and analyzed, focusing on the nascent dialectal varieties, their importance, the impact of substrate languages and of others that have influenced what is known as French (Greek, Italian, and Arabic among many others). While the language is in part stabilized in Metropolitan France, no thanks to the Academie whose influence will be debated, French has gone through further changes on the American and African continents. French of Quebec and that of several countries in north and sub-Saharan Africa also explored. Several documentaries complement the seminar.

GEO - Geography

GEO 402 - Medical Geography (3 crs.)

Introduces student to a geographical approach in the analysis of problems regarding environmental health. Dynamic interaction between the total person and the total environment (physical, biological, cultural, economic) lie at the core of geography, a discipline that integrates natural and social sciences. Consideration of such interactions is essential for an understanding of the changes that occur in the distribution of health and disease, when, for instance the environment is altered, or human lifestyles undergo substantial modification.

GEO 404 - Groundwater and Hydrogeology (3 crs.)

Examines the fundamental concepts of groundwater and hydrogeology in the context of real-world applications on the foundations of theory. Emphasis on the principles of groundwater flow, well installation, field data collection, and the analysis of physical and water chemistry as they relate to professional groundwater investigations. Grades based on exams and application-oriented assignments (problem sets). Required field trip(s) will supplement classroom material (field trip dates and times will be determined during class). *Prerequisite: ESS 110 or ESS 210.*

GEO 405 - Environmental Conservation and Management in PA (3 crs.)

Examines the management of environmental and natural resource issues. Legislation, policies, programs, and strategies that are developed at the local, state, and federal levels of government are discussed as they apply to these issues. Emphasis on current environmental and natural resource issues in Pennsylvania. Topics that will be considered during the course will include the environment as a public policy issue, waste management and cleanup programs, energy, air and water pollution, and the use of public lands. Through lectures, discussion, readings, writing

assignments, and case study analysis, the student will be introduced to a range of environmental and natural resource issues.

GEO 415 - Regional Geographic Studies (3 crs.)

Opportunity to study the physical and human landscapes within a particular region of the world not covered by regular courses. Departmental faculty bring their regional expertise into the classroom and provide students with a focused examination of the region with respect to current political, social, economic, physical, and environmental issues. Faculty highlight their own work in the region and place their research within the broader regional context.

GEO 420 - GIS III: Advanced Geographic Information Systems (3 crs.)

Examines advanced topics in GIS analysis such as spatial data uncertainty, error propagation, spatial data display, transformations of geographic phenomena, and visualization. Skills focus on advanced spatial analysis, terrain modeling, georectification of data, and network analysis. Students design and implement an independent GIS project during the course. *Prerequisites: GEO 202, GEO 363.*

GEO 425 - Image Processing (3 crs.)

Computer processing of remotely sensed imagery is explored and laboratory exercises enhance understanding of image processing. Intermediate and advanced processing techniques performed on imagery from local and non-local areas. Techniques include spatial modeling, multispectral classification, and learning new techniques in processing satellite-borne imagery and other data. *Successful completion of GEO 339 Remote Sensing is suggested.*

GEO 440 - Field Techniques (3 crs.)

Studies geoenvironmental aspects of the local landscape by direct field observation. Various procedures and techniques are utilized to collect data concerning landforms, geology, soil, streams, air quality, population, transportation, housing characteristics and land use. Instruments, maps, air photographs, and statistics are used to aid in the research, analysis, and evaluation of the field problem.

GEO 441 - Quantitative Methods (3 crs.)

Broad-based education in the geographical sciences requires a proficiency in applying statistical techniques to environmental problems. Provides a comprehensive and empathetic approach to statistical problem solving using practical geographic examples.

GEO 444 - Environmental Land-Use Planning (3 crs.)

Studies the spatial pattern of land-use development in rural and urban areas and interaction between urbanization and environment. Examines the physical and cultural requirements of environmental land-use planning including the study of the land-use classification, planning and zoning procedures, economic activity and the city as an ecosystem. City planning techniques, land-use mapping and field study of local region are utilized.

GEO 446 - Water Resources Management (3 crs.)

Roles of water resources management policies and institutions are examined within central theme of unified river basin management. Stresses interrelationships among watershed planning; relevant legislation; agency authority and coordination; and the geography of watershed management. North American case studies used to illustrate multiple use issues, including aquatic ecology, wetlands, floodplain management, recreation, water supply, hydropower, industry, and commercial shipping. *Prerequisite: GEO 226.*

GEO 450 - Geography-Geology Field Studies (1-3 crs.)

One week to ten-day regional field study observing and analyzing the physical and cultural landscape. Emphasis placed upon the

physical and historical geology and geography of a prescribed route including several states. *Prerequisites vary depending on topic. Please contact instructor.*

GEO 490 - Selected Topics in Geography (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

GEO 503 - Fundamentals of Geoenvironmental Research (3 crs.)

Builds student skills common to developing, implementing, and disseminating research projects in the major sub-disciplines of geoenvironmental studies. Generates opportunities to develop critical reading, writing, and presentation skills. Students will develop a literature review and a research proposal, as would be appropriate for either an independent research project or a master's thesis. Also develops fundamental skills for preparing grant proposals, professional reports, and oral and graphic presentations.

GEO 514 - Urban Environment (3 crs.)

Examines the impact of information technologies (IT) on the arrangement of human activities. The new technologies in information should make it possible to share information on a global scale. Information on problems ranging from hunger, employment opportunities, environmental degradation, traffic congestion, housing, and many other situations can be shared in a very short span of time over vast areas. Use of new opportunities in information availability and information sharing should assist anyone concerned with a vast range of human problems with their potential solutions. Explores the problems and prospects for using information technology to communicate with people in similar or very different cultural and physical environments to guide the growth and development of human activities.

GEO 517 - Applied Geographic Information Systems (3 crs.)

Reviews advanced geographic information systems (GIS) applications and the use of geographic information management technology in environmental analysis. Spatial mapping and data applications will be related to renewable resource management, transportation and logistics, infrastructure management, natural resources and land use planning, public health and safety, environmental hazards, mineral exploration, environmental assessment and monitoring, map and database analysis and research and education. Emphasis is on how GIS can assist in answering questions, solving problems, and analyzing spatial data. State-of-the-art GIS software is used to show applications of geographic information technology for geoenvironmental and natural resource management projects.

GEO 522 - Geoenvironmental Hydrology (3 crs.)

Focuses upon the continental or land phase of the hydrologic cycle and includes the study of supply and the geographical distribution of water in lakes, rivers, streams, embayments, and underground water supplies and the use and/or misuse of these water resources for urban, suburban, and rural living. Consideration given to recent day knowledge, attitudes, and technology concerning these water resources. Local water resources and drainage basins are used as laboratory areas for field problems and reports.

GEO 524 - The Geologic Environment (3 crs.)

Concerned with major concepts of physical and applied geology and their relationship to human activity. Analysis of minerals and rocks, earth structures, global tectonics and surficial processes examined in a lecture, laboratory, and field investigation format.

GEO 528 - Geography of Economic and Environmental Systems (3 crs.)

Focuses on the quantitative and qualitative examination of interrelationships between human, economic, and environmental systems across a variety of spatial and temporal scales. The dynamics of environmental/ecological well being and valuation are explored via broadly-based economic perspectives and using both conceptual and analytical frameworks. The course uses a geographic approach to link ways in which natural and human environments are intertwined through the nexus of production, exchange, consumption, and policy at global, regional, and local levels. Significant emphasis is placed on student discussion, research, analysis, and presentations. Previous coursework in macroeconomics, microeconomics and quantitative analysis is strongly suggested. Proficiency in word processing, spreadsheet, and presentation software is expected.

GEO 530 - Mapping Sciences (3 crs.)

Advanced methods in computer-assisted mapping and map analysis (geographic information systems or GIS). Emphasis placed upon techniques of establishing, managing spatial (geographic) data bases, cartographic modeling and analysis, and digital map composition using state-of-the-art GIS software. One hour lecture, three hours computer laboratory per week.

GEO 531 - Geomorphology (3 crs.)

Geomorphology is the systematic description, analysis, and interpretation of landscapes and the processes that change them. Emphasizes both the qualitative and quantitative aspects of landscape change and has three principal objectives: 1) to provide a solid grounding in the basic concepts of process and Quaternary geomorphology, 2) to apply these concepts to the central Appalachian Highlands region, and 3) to examine these relationships in the field. Consists of in-class lecture, discussion, laboratory assignments, outside readings, a written paper and presentation, a local field trip, and a two-day field trip to Maryland and Virginia. *Prerequisite: introductory geology course or equivalent.*

GEO 532 - Disease and the Environment (3 crs.)

Seminar in geoenvironmental health hazards such as solid waste, air, and water pollution. Emphasis on public health problems these hazards pose, the application of geographic methods, and tools of analysis. Means available to cope with geoenvironmental hazards and associated policy debates are examined. Lecture information limited. Students expected to participate actively in every seminar meeting.

GEO 533 - Science of Land Use Change (3 crs.)

Land use and land cover change can have dramatic social and ecological consequences. This seminar course will focus on understanding and recognizing drivers of land use and land cover change and on recognizing linkages between land use and land cover change and other ecosystem processes, such as hydrologic processes and habitat fragmentation. The course will also focus on methods for analyzing land use and land cover changes, landscape patterns, and will incorporate geographic information systems and modeling.

GEO 536 - Problems of the Atmospheric Environment (3 crs.)

Examines and analyzes various weather and climate topics, both natural and human-influenced. Topics include brief review of atmospheric basics, air pollution, ozone, ENSO, climate change, climate modeling, and greenhouse warming. Potential solutions to problems explored. Presented in seminar format and includes journal paper discussion and evaluation, writing opinion papers on

controversial atmospheric issues, group projects, class presentations, and a term paper. Interrelationships among the various atmospheric problems are emphasized.

GEO 542 - Land-Use Regulations (3 crs.)

Provides student with knowledge of the components of community level land use regulations. The following community level system components are examined: comprehensive plan, zoning ordinance, subdivision regulations, taxation, other minor land acquisition techniques.

GEO 546 - Geoenvironmental Research I (3 crs.)

Research course to be worked out with member of the geography-earth science department.

GEO 548 - Geoenvironmental Research II (3 crs.)

Research course to be worked out with member of the geography-earth science department.

GEO 594 - Selected Topics in Geography (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

GEO 599 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

GEO 609 - Internship I (3 crs.)

Provides opportunity to practice geoenvironmental theory and concepts as an observer and participant in the process. Placement on a limited basis with consulting firms and state and local governments enhances the student's preparation in the field.

GEO 610 - Internship II (3 crs.)

Provides opportunity to practice geoenvironmental theory and concepts as an observer and participant in the process. Placement on a limited basis with consulting firms and state and local governments enhances the student's preparation in the field.

GEO 612 - Thesis I (3 crs.)

GEO 613 - Thesis II (3 crs.)

GRN - Gerontology

GRN 491 - Advanced Selected Topics in Gerontology (1-3 crs.)

Opportunity to offer advanced courses in areas of program minor not covered by the regular courses.

GRN 650 - Applied Projects and Research in Aging (3 crs.)

Students choose one of two options depending on career goals: 1) applied internship placement that focuses on working with and/or advocating for older adults; or 2) complete a formal thesis with a gerontology theme with the goal of preparing for advanced graduate level work.

GRN 690 - Learning Something New: Advanced Selected Topics in Aging (3 crs.)

Students will have the opportunity to study concepts and applications in the area of diverse aging individuals not covered by regular graduate coursework (to be taught by interdisciplinary faculty over summer terms).

HCS - Human Communication Studies

HCS 400 - Senior Seminar (3 crs.)

Required capstone course for all HCS majors that emphasizes a summative experience in the advanced studies of selected areas of the field of human communication. Students expected to produce, from their own scholarly investigation, results that are potentially presentable at professional conferences and in scholarly publications. *Prerequisites: HSC360 with a C or better, senior status, and approval of the instructor.*

HCS 410 - Feminist Perspectives on Communication Theory and Research Methods (3 crs.)

Critical examination of traditional theories of human communication and research methods in terms of their invalid claims to universalism and their value implications that have perpetuated a worldview that is masculine biased. Students develop an understanding of the interaction process, in different communication contexts, as well as the role of the researcher in assessing communicative encounters. Students deconstruct traditional perspectives on basis of the insights gained through diverse feminist perspectives and discover alternative approaches to communication studies.

HIS - History

HIS 402 - Revolutionary America (3 crs.)

Explores the fundamental changes in American life during the 18th century and their culmination in the American Revolution. Analyzes those themes within the conceptual framework of the modernization of traditional societies and in the context of broader Western and American developments. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 or instructor's permission.*

HIS 407 - Women in Comparative Perspective (3 crs.)

Topical exploration of female experiences in selected global cultures. How different societies have constructed gender (or defined the social meaning of being a woman) over time explored in a comparative perspective. Intellectual discourses of religion, education, and politics structure cultural comparisons of women's work, their position within the family, attitudes toward sexuality, civil rights, and access to public power. Through readings, discussions, films, and occasional lectures the class examines the historical development of modern gender conventions in various world regions and of controversies about the human rights of women. *Prerequisites: HIS105 and HIS106 and sophomore standing or instructor's permission.*

HIS 410 - The Islamic World (3 crs.)

Explores the many contours of the Islamic World from 600 to 1500 CE, focusing on Islam as a religion and as an organizing principle of many diverse societies. Examines how politics, warfare, society, and cultures developed in the Islamic World. Includes pre-Islamic Arabia, the rise of Islam, Arab expansion and adaptation, nomadic-urban encounters, and development of socio-political institutions, religious sects, and cultural-scientific achievements. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 and sophomore standing or instructor's permission.*

HIS 413 - Pennsylvania History (3 crs.)

Deals with development of Pennsylvania from the eve of European settlement to the present. Attention given to political, economic, and social trends and institutions from the 17th through the 20th centuries. Pennsylvania's role in national and international history

also studied. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 and sophomore standing or instructor's permission.*

HIS 423 - Issues in 20th-Century Europe (3 crs.)

Chronological and topical study of political, economic, social, and intellectual trends of our era. Modern wars, the struggle between authoritarianism and democracy, the East-West split, and the European economic community are major themes. *Prerequisites: HIS105 and HIS106 and sophomore standing or instructor's permission.*

HIS 428 - Issues in the Gilded Age and Progressive Era (3 crs.)

Covers political, economic, social, and intellectual aspects of the Progressive Movement, tracing its origins in the 19th century and showing how progressivism was a part of the background of the New Deal. Special attention given to the all-important transition of the concept of liberalism from laissez-faire individualism to state regulation. Emphasis placed upon the differing interpretations of the Progressive Movement developed by various historians. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 and sophomore standing or instructor's permission.*

HIS 430 - U.S. Cultural History (3 crs.)

Focuses upon significant cultural developments in American History, and upon the importance of culture to major trends and events in the U.S. past. Course addresses cultural theory, definitions of culture, multiculturalism in history, and the roles of culture and communication in the interpretation of history. Individual subjects covered each semester will include some combination of the following: mass media (including radio, television, print), folklore, religion, material culture, and performance culture. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 and sophomore standing or instructor's permission.*

HIS 433 - Oral History (3 crs.)

Introduces students to methods and uses of oral history. Students learn to analyze and use oral history sources, and will practice oral history protocols including the conduct of recorded interviews, the storage of oral history recordings, and the transcription of oral history interviews. Students will also be introduced to alternative uses for oral history including audio and video documentary, and digital methods of exhibition. *Prerequisites: HIS105 and HIS106 and HIS201 or HIS202 and sophomore standing or instructor's permission.*

HIS 454 - China and the Outside World (3 crs.)

Investigates China's relations with the outside world during its pre-modern history. Since China is somewhat geographically isolated from the rest of Eurasia, historians have tended to assume Chinese civilization is mostly the product of indigenous developments. The course challenges this assumption by looking at how China and people outside of its borders have influenced each other. *Prerequisites: HIS105 and HIS106 and sophomore standing or instructor's permission.*

HIS 490 - Selected Topics in History (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

HIS 492 - Selected Topics in History (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

HIS 493 - Selected Topics in History (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

HIS 501 - Introduction to Applied History (3 crs.)

Explores the practical application of historical skills and practices in a variety of settings (including business, government, and historical institutions such as museums, historic sites, archives, and historical societies), and the issues historians face when they preserve, interpret, and present the past to the general public. Through hands-on experience, students examine areas such as archive and manuscript curating, historical editing, oral history, material culture studies, museums, historic preservation, historical media production, and history on the World Wide Web. Special emphasis placed on the financial, legal, ethical, political, and interpretive issues faces by historians presenting the past to diverse audiences.

HIS 502 - Introduction to Archives (3 crs.)

Explores the history of archives and the historical roots of modern archival practices, and the rise of the archival profession in the United States. Examines the principles and best practices in archival collection development, accessioning, appraisal, arrangement, description, and reference, including consideration of the special issues posed by electronic records and audiovisual materials. Surveys the basic principles and techniques for the preservation and conservation of archival records, including paper documents, photographs, and electronic media. Students will investigate the different missions, audiences, and approaches used by government, church, business, labor, and educational archives.

HIS 505 - Advanced Topics in Public History (3 crs.)

Provides intensive examination of some of the specialized historical methods used by historians working for museums, historic sites, historical societies, government agencies, and other types of historical organizations. Emphasis may be on one or more of the following: oral history, local history, material culture studies, historical editing, historic preservation, or museum studies. Students gain hands-on experience by designing and executing significant public history projects and by conducting historical fieldwork.

HIS 513 - Seminar in U.S. Women's History (3 crs.)

Explores topics and themes pertinent to shaping the past experience of American women, including personal, property, and political rights; ideologies of gender; rural and urban work; education; class, race, and ethnicity; social policy; and sexuality. Readings and discussion in the seminar focus on both empirical and theoretical literature of the field.

HIS 515 - Seminar in 20th Century U.S. Social History (3 crs.)

Reviews United States history since 1945 through the topical approach. Problems such as internationalism, civil rights, extremism, and comparable topics are considered as they reflect the impact of the assumption of world leadership and responsibility on traditional American concepts, ideals, and values.

HIS 516 - Seminar in African American History (3 crs.)

Deals with the experience of the black man in America from colonial times to the present. Origins and developments of white attitudes toward black Americans and the origin and development of the attitude of blacks emphasized. Students examine topically and in-depth attitude development, slavery, segregation, the Civil Rights movement, and the contribution of black leaders to American life. *Prerequisites: HIS201 and HIS202 or permission of instructor.*

HIS 519 - Seminar in International Relations (3 crs.)

Treats United States diplomatic history from 1914 to the present. Considers interpretations of major diplomatic events such as

American entry into World War I, World War II, the Cold War, the Korean War, and the Vietnam War, as well as peacemaking at Versailles, Yalta, and other negotiated settlements. Also develops dominant themes in United States diplomacy, including foreign economic interests, Caribbean intervention, isolationism, collective security, the nuclear arms race, and disarmament.

HIS 525 - Seminar in U.S. Regional History (3 crs.)

Introduction into the major historiographical issues and research methods of regional and local U.S. history. Focuses attention on questions of regional identity and themes of the relationship between region and nation, and the relationship between region and world. Trains students in analyzing regional and local primary sources. Alternates emphasis between the American West and the American South.

HIS 526 - Seminar in the Civil War Era (3 crs.)

Considers new and old interpretations regarding this political watershed's coming and consequences (roughly 1830 to 1880), emphasizing social, cultural, and political perspectives.

HIS 534 - Seminar in Modern German History (3 crs.)

Analysis of critical issues in German history since 1871, with emphasis on the period since 1919. Particular emphasis given to collapse of the Weimer Republic and Hitler's dictatorship.

HIS 535 - Seminar in Medieval Studies (3 crs.)

Focuses upon the reading and interpretation of various writings of the Early Middle Ages as well as secondary accounts dealing with the age that have come to be recognized as standard works in the field. The selection of works affords a coverage of the economic, political, philosophical, religious, and literary aspects of the period.

HIS 543 - Environmental History (3 crs.)

Deals with the interaction between humans and the natural world in a global comparative perspective. Explores historiographical trends in the field of environmental history including the contentious meaning of such terms as "The Environment," "Nature," and "Wilderness," the tension between social and natural histories, and the role/s of colonialism, imperialism, and nationalism in reshaping conceptions of the environment.

HIS 558 - Seminar in East Asia and the Modern World (3 crs.)

A comparative look at major themes in the histories of China and Japan from earliest times to the present. Premodern topics include prehistory, the development of state Confucianism, the spread of Buddhism, roles of scholars and warriors, the impact of Inner Asia, political decentralization, gender, and peasant society. Includes study of how traditional cultures have been transformed as a result of contact with the West since the 19th century.

HIS 593 - Selected Topics in History (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

HIS 594 - Selected Topics in History (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

HIS 598 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

HIS 599 - Readings in History (3-6)

Opportunity for independent readings in an area of special interest to the student of history, such as the major field of American,

European, and non-Western history, including political, economic, social, intellectual, and cultural developments. *Prerequisites: permission of the department and instructor.*

HIS 600 - Historical Research Methods (3 crs.)

Seminar in historical research techniques, analysis of source materials, and preparation of a research paper. Students expected to perform research and prepare and present a model seminar paper. Emphasizes the important role electronic resources have assumed in basic historical research methods. Students should schedule this course as early as possible in the program.

HIS 601 - Research in Local and Regional History (3 crs.)

Intensive study and hands-on research of micro regions or localities defined by their natural geographic, economic, or cultural characteristics. Course examines the theoretical and methodical issues of local and regional historical research and then has students apply those concerns in the intensive study of two or more localities. Students are required to complete a research paper demonstrating mastery of the techniques of local and regional historical research.

HIS 609 - Internship I (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

HIS 610 - Internship II (3 crs.)

Opportunity for students to gain practical experience in their chosen career area.

HIS 612 - Thesis I (3 crs.)

HIS 613 - Thesis II (3 crs.)

ISS - Information System Studies

ISS 515 - Information Systems Project Management (3 crs.)

Introduces the student to the principles and practices necessary to be an effective information systems team member or project manager. Covers project scope, time, costs, quality, and human resource management techniques as applied to the kinds of project management problems and issues unique to the IS environment. The student will obtain hands-on experience using MS Project as well as other types of project management software. Specific course emphasis will focus on the techniques of project management, leadership, teamwork, and project risk management. Casework will be a major part of this course.

ISS 520 - Programs, Data, and File Structures (3 crs.)

Advanced programming, data organization, and accessing design techniques.

ISS 530 - Modeling and Decision Systems (3 crs.)

Explores a wide range of analytical techniques that may be employed in business decision-making processes. Topical coverage includes simulation, project management, financial analysis, optimization, break-even analysis, and inventory management. While the theoretical foundations of these concepts are addressed, emphasis is on applications and solution techniques relevant to practical business situations. Utilization of current computer technology is an integral part of the course.

ISS 540 - Data Communications, Networks, and Distributed Data Processing (3 crs.)

Covers communications environments, communication system components, networks and control, common carrier services, design

of communications networks, network management and distributed environment, local area data networks, future networks.

ISS 550 - Database Design (3 crs.)

The data environment, basic technical concepts and system resources for data, database concepts, use and management of databases.

ISS 560 - Introduction to E-Business (3 crs.)

Covers the Internet and electronic commerce concepts related business operations and management, technology utilization, and industry-specific applications. It is intended to introduce students to the current business, management, technology, and legal issues in e-business. Topics span a wide range and include web strategies, e-marketing, e-human resources, e-finances, B-to-B systems, e-legal issues, website design, technology needs, and database-driven websites.

ISS 570 - Information Analysis (3 crs.)

Designed to provide student with the necessary skills to accomplish the systems analysis and logical design of information systems. It will include the role of a modern systems analyst as a problem solver in the business organization. Course will progress through the system development life cycle (SDLC) and include project planning, project management, and feasibility assessment. Different methodologies, models, tools, and techniques used to analyze and design and build systems will be introduced.

ISS 580 - Web Programming (3 crs.)

Includes, but not limited to, the following topics: introduction to the Internet and the World Wide Web, programming, using Microsoft Express and Visual InterDev, JavaScript programming, Dynamic HTML programming, ActiveX controls, electronic commerce and security, web servers, active server pages, CGI and PERL, and XML. A major portion of this course will be to build a website based upon an e-commerce business.

ISS 590 - Information Systems Development I (3 crs.)

First in a two-semester sequence where students apply the knowledge they have gained in MSIS program. While studying various software development paradigms, the students practice those techniques by performing requirements analysis and design of a state-of-the-art information systems project to solve a given business problem. Stresses team management, project planning, and risk assessment in addition to technical skills.

ISS 600 - Information Systems Development II (3 crs.)

Second in a two-semester sequence where students apply the knowledge they have gained in MSIS program. The projects started in ISS 590 are implemented and tested. Technical knowledge and experience with configuration management tools, inspection, and testing strategies is paired with project management and risk analysis techniques.

MAT - Mathematics

MAT 400 - History of Mathematics (3 crs.)

Focuses on the development of mathematical ideas relevant to K-12 mathematics. Some examples include episodes in the development of number systems, algebra, geometry, trigonometry, number theory, and analytic geometry. Some time spent on multicultural issues, sometimes referred to as "ethnomathematics."
Prerequisite: MAT 320 or at least junior standing.

MAT 410 - Numerical Analysis (3 crs.)

Primarily methods of numerical approximation to the value of functions, polynomials, and systems of equations. Topics include accuracy of approximate calculations, interpolation and interpolating polynomials, solution of algebraic and transcendental equations. Numerical solution of simultaneous linear and nonlinear equations, principle of least squares, difference equations, and quadrature formulas are studied. *Prerequisite: MAT 212 and either CSC 180 or CSC 110.*

MAT 413 - Statistics II (3 crs.)

Study of statistical methods and their application to various data sets. The entire statistical process of data collection, fitting data to a model, analysis of the model, verification of the model, and inference will be covered. Topics include hypothesis testing, two-population means, bivariate relationships, regression, ANOVA, experimental designs, two-way tables, time series, survival analysis and multivariate analysis. Examples taken from a variety of disciplines. Concepts reinforced through class projects. *Prerequisite: MAT 313.*

MAT 421 - Number Theory and Cryptography (3 crs.)

Introduction to a selection of topics from the related fields of Number Theory and Cryptography. Topics may include congruence arithmetic, primitive roots, quadratic residues, perfect numbers, Pythagorean triples, sums of squares, Fermat's Last Theorem, and primality testing, various substitution ciphers including affine, Vigenere, and Hill ciphers and the RSA public key encryption system with several variations. Algorithms for each encryption scheme discussed will be introduced and implemented. *Prerequisite: MAT 320.*

MAT 422 - Partial Differential Equations (3 crs.)

Introduction to Partial Differential Equations, a fundamental branch of applied mathematics. Three classical equations from mathematical physics are discussed: the wave equation, the heat equation, and Laplace's equation. Techniques that include separation of variables, Fourier series, and fundamental solutions are introduced to address these equations. An introduction to numerical methods is also included. *Prerequisites: MAT 213 and MAT 322.*

MAT 425 - Advanced Algebraic Structures (3 crs.)

Detailed study of one or more of the higher level algebraic structures such as groups, rings, fields, or abstract vector spaces. Emphasis on structure theorems such as the fundamental theorem of group homomorphisms and uses the sophistication developed in MAT 320. *Prerequisite: MAT 318 and MAT 320.*

MAT 430 - Complex Analysis (3 crs.)

Introductory course in the theory of functions of a complex variable. Topics include complex numbers, analytic functions, contour integration, Cauchy's Theorem, and infinite series. Methods of a logical proof are developed and used throughout. *Prerequisite: MAT 213 and MAT 320.*

MAT 441 - Real Analysis I (3 crs.)

Designed to give a fundamental understanding of the concepts used in elementary calculus. Methods of a logical proof are developed and used throughout. Topics include real numbers, sequences, limits, continuity, derivatives, and the Riemann integral. *Prerequisites: MAT 212 and MAT 320.*

MAT 450 - Combinatorics (3 crs.)

Concerned with computing within discrete mathematical structures and combinatorial problem solving. Topics include sets and graphs,

counting and enumeration techniques including recurrence relations and generating functions, and graph theory algorithms.

Prerequisite: MAT 320.

MAT 456 - Deterministic Methods of Operations Research (3 crs.)

After a brief historical introduction, presents a detailed study of mathematics related to linear programming. The theory includes the simplex method, duality theory, sensitivity analysis, and matrix games. Some applications will be given. *Prerequisites: MAT 212 and MAT 318.*

MAT 476 - Probability (3 crs.)

In-depth development of probability and distribution theory. Topics include counting techniques, Bayes' Theorem, random variables, moment-generating functions, univariate and multivariate probability distributions, and the Central Limit Theorem.

Prerequisites: MAT 213, and MAT 318.

MAT 486 - Mathematical Statistics (3 crs.)

Continuation of MAT 476. Topics include transformations of random variables, order statistics, convergence in distribution, point and interval estimation, likelihood ratio tests, hypothesis testing, linear models, analysis of enumerative data, and analysis of variance.

Prerequisite: MAT 476.

MAT 490 - Selected Topics in Mathematics (3 crs.)

Opportunity to offer experimental courses at the senior level in areas of mathematics not covered by regular courses. Topics such as foundations of mathematics, number theory, graph theory, cryptography, and advanced applications of mathematics are appropriate at this level.

MAT 516 - Mathematical Modeling (3 crs.)

Involves the process of developing mathematical models as a means for solving real problems. Course will encompass several different modeling situations that use a variety of mathematical topics. The mathematical fundamentals of these topics will be discussed, but with continued reference to their use in finding the solutions to problems. Connections to NCTM Standards, current curriculum projects and the use of various technologies will be made throughout the course.

MAT 527 - Number Theory Discovery (3 crs.)

Number theory, one of the oldest branches of mathematics, is very much an alive subject, with discoveries made every day. Course is intended to focus on topics that relate specifically to the natural numbers. These will be treated as motivational problems to be used in an activity-oriented approach to teaching mathematics at the middle and high school levels. Pace will be non-frantic and designed to promote understanding of the topics covered. Topics include prime number facts and conjectures, divisibility theory for integers, magic squares, Pascal's triangle, Fibonacci numbers, modular arithmetic, and mathematical art.

MAT 528 - Algebra for Teachers of Mathematics (3 crs.)

Classically algebra has its origins in the solution of equations. The term algebra comes from the Arabic word meaning reductions or restoration and had to do with the idea that in equations whatever was done to one side had to likewise be done to the other in order to maintain or restore equivalence. Modern algebra developed from several classical problems such as: efforts to systematically understand the solutions of polynomials of higher degree; problems of geometry such as construction of regular polygons, trisection of angles, etc., and problems in number theory, e.g. Fermat's Last Theorem. In this sense, algebra is applied mathematics. Thus the abstraction of algebra is not for its own sake but because it results in

insight and mathematical power. We will study the integers, rationals, reals, polynomials, and complex numbers from the point of view of being examples of some of the fundamental objects of algebra—rings and fields.

MAT 534 - Geometrical Concepts (3 crs.)

Focuses primarily on the foundations and applications of Euclidean and non-Euclidean geometries. Incorporates collaborative learning and the investigation of ideas through group projects and the use of technology. Topics include finite geometries, geometric transformations, triangle and circle properties not previously encountered, and spherical geometry. Course will provide deeper understanding of geometry that is needed to teach geometry and to illustrate connections between it and other branches of mathematics.

MAT 543 - Concepts of Calculus (3 crs.)

Many schools teach some form of calculus for 11th or 12th grade students. Current reform efforts in calculus have shifted the emphasis toward conceptual understanding of key ideas. Conceptual questions take many forms, including interpreting graphical data, using numerical estimation, proving properties of functions and operations, and understanding the foundations of the basic calculus tools. Course will follow a standard textbook for single variable calculus along with material correlated with the AP Calculus exam, and will emphasize the theory behind the main ideas to prepare teachers for creation, discussion, and assessment of conceptual calculus problems.

MAT 572 - Probability for Middle and High School Teachers (3 crs.)

Explores introductory topics such as computing probabilities for simple, compound events, mutually exclusive, and conditional events. Further topics include the study of random variables, expected value, discrete distributions including binomial and Poisson, continuous distributions including normal, uniform, and exponential, simulations, and sampling distributions of sample statistics. TI-83 graphing calculators and the statistical package Fathom will be used throughout the course.

MAT 573 - Statistics for Middle and High School Teachers (3 crs.)

Involves the study of statistical methods. Both graphical and numerical representations of data, including histograms, box plots, scatterplots, and measures of center and spread will be introduced. Process of data collection and experimental design will be explored. Course will conclude with topics involving inference, including confidence intervals and hypothesis tests for means and proportions. Real data sets from a variety of disciplines will be utilized. The TI-83 graphing calculator and the statistical package Fathom will be used throughout the course. *Prerequisite: MAT 572.*

MAT 594 - Selected Topics in Mathematics (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

MAT 600 - Elements of Research (3 crs.)

Devoted to research techniques and procedures in mathematics and/or mathematics education. Instructor discusses research methods and each student selects a topic on which to do a research study. This study is presented to the class in oral and written form.

MBA - Master Business Administration

MBA 502 - Managerial Accounting (3 crs.)

Develops an understanding of the quantitative use of accounting data for decision making within the firm. The focus is on developing an understanding of and appropriate use of cost in

managerial decision making. Although the appropriate use of cost in this course refers primarily to short-term decisions, the strategic implications of cost analysis are also addressed.

MBA 529 - Global Managerial Finance (3 crs.)

Explores basic financial theories, their application, and financial decision models necessary for handling complex corporate financial problems in the global environment. Emphasizes the important role of finance in the global business operations.

MBA 532 - Marketing Research (3 crs.)

Investigate how all types of business research is conducted as well as determining the quality and validity of research reports and findings. Business research is an important management tool that exerts a major influence on decision making. It provides insights into and solutions for organizational problems. The pedagogy will be applied and real world. Extensive use of cases and actual business problems will be utilized. Finally, greater emphasis on using the power of the Internet and computer software to conduct business research will be employed.

MBA 533 - Business Operations and Logistics Planning (3 crs.)

Introduces students to scope and variety of logistics operations as they pertain to transforming resources into goods and services. Topics include demand forecasting, planning for logistics operations, resource management, production and service delivery strategies, and quality assurance.

MBA 534 - Buyer Behavior (3 crs.)

Primary goal is to enhance student's understanding of customer behavior and ultimate goal is for student to develop effective marketing techniques. Includes consumer psychology as well as its relevance for marketing researchers and managers. Presents a comprehensive, systematic, and conceptual framework for understanding people as consumers and organizational buyers. Makes heavy use of models from psychology and social psychology. Topics such as demographics, lifestyle, information processing, motivation, social influence, brand loyalty, attitude measurement and change, and decision-making are studied. Other topics may include cross-cultural differences in customer behavior, ethics, and the impact of technology on customer behavior.

MBA 546 - Ethics in Organizations and Business (3 crs.)

Ethics has been defined as the study of right and wrong, good and evil, and justice and injustice. Deciding how to do the right, good, and/or just thing as a manager is sometimes difficult. This course won't provide any easy answers, but will make the student aware of the personal, social, cultural, and, above all, organizational pressures that influence ethical decision-making. It also will give the student some tools for coping with the difficult decisions that must be made. Topics will include ideas about ethics and individual moral development, ethics in an organizational context, and models of ethical decision-making in business, as well as corporate codes of conduct and other institutional attempts at encouraging ethical behavior. As this is a business not a philosophy course, the emphasis will be on casework and application rather than theory.

MBA 547 - Management Information Systems and Applications (3 crs.)

Designed to provide a managerial overview of the role of information systems in the business environment, the roles, and responsibilities of those involved, and the potential future trends in information technology and their implications on the business world. Information is a powerful resource and information systems (IS) are used in almost every business function within every industry. Knowledge of information and how it flows within

processes is an essential element of success in virtually any position. While not everyone in business needs to be an IS professional with detailed technical expertise; everyone needs an in depth understanding of the subject to know how to use and manage IS in his or her profession.

MBA 548 - IT Management and Innovation (3 crs.)

Examines frameworks, concepts, practices, and examples that help business managers understand the value of IT and generate business value from investments in IT and its complimentary business resources. Topics include strategic alignment of IT with organizational goals, organizational efficiency and transformation enabled by IT, organizational learning and innovation enabled by IT, positioning and managing of the IT function, IT and sustainability. Uses lecture, projects, case studies. Also examines from business perspective systems and technologies that help companies innovate and deliver business value such as business analytics, cloud computing, enterprise resource planning, customer relationship management, and supply chain systems.

MBA 550 - European Business Environment (3 crs.)

Explores the current environment for business in Europe, with particular emphasis on the European Union. Compares and contrasts business practices in Eastern and Western Europe with those typical in the United States. Includes travel to Europe and visits to businesses, government institutions, and cultural sites in order to gain firsthand knowledge of European business practices and prospects. Examines the current economic conditions in Europe and possible scenarios for the future.

MBA 552 - Entrepreneurship (3 crs.)

Examines all aspects of starting a new business, with emphasis on the critical role of recognizing and assessing opportunities. Topics include attributes of entrepreneurs and entrepreneurial careers, creating and evaluating opportunities, writing business plans, and financing new ventures.

MBA 554 - International Business (3 crs.)

Presents broad view of issues facing professionals in the international business area. Topics are broad and include international trade, exchange rates, finance, organizational structure, and international legal dimensions. Student learns to weave the social, technical, cultural, risk, and human relations factors into a global context.

MBA 556 - Organizational Leadership (3 crs.)

Examines the leadership and influence issues managers face. Attention is given to leading up, down, and across the organization, recognizing leadership is not limited to managers. Through guest business speakers, cases, readings, projects, and simulations, students gain greater insight and skill in leading. Topics include characteristics of effective leaders, power and influence strategies, crisis management, organizational politics, and leadership assessment.

MBA 557 - Negotiation (3 crs.)

Course is designed to provide students with skills needed to approach negotiation and bargaining situations with confidence. This includes providing frameworks for the analysis conflict and its origins, knowledge about one's own tendencies in negotiation, and a chance to experiment with negotiating techniques in a variety of contexts. Topics include: integrative and distributive negotiations, individual differences in bargaining styles, coalitions, team negotiations, negotiating through agents, and ethical issues in negotiation. Course content is delivered through readings, cases, and lecture, however, considerable emphasis is placed on in- and

outside class negotiation simulations and subsequent classroom discussion.

MBA 558 - Ethics and Sustainability (3 crs.)

A combined conceptual and application course. Explores the various concepts of business ethics, social responsibility, corporate citizenship and sustainability. Specifically explores stakeholder theories, environmental and social concerns, criticisms of capitalism as well as specific ethical and social issues that would apply to the various business fields including employee relations, marketing, operations, finance, and accounting. Also explores the application of these concepts to various business cases.

MBA 561 - Human Resources and Development (3 crs.)

Examines essential cutting-edge organizational strategies and practices that enable leaders/managers to implement effective employment team environments by attracting, deploying, and retaining proficient employees within the context of appropriate federal/state legal employment regulations. Topics may include legal regulation of the employment relationship, work flows, staffing, employee separations, performance appraisals, training and career development, compensation, employee rights, employee and labor relations, and global HR issues.

MBA 565 - Information Management and Analysis for Decision Making (3 crs.)

Provides skills and tools necessary for managers to efficiently solve problems using information technology to support the decision making process. Using a variety of software packages, structured, semi-structured, and unstructured problems will be analyzed and the role of information technology investigated. Models based on quantitative and non-quantitative data will be studied also.

MBA 570 - Marketing Management (3 crs.)

Detailed study of concepts and procedural alternatives in: the delineation of the market target, the development and implementation of the marketing mix, and the control and analysis of the total marketing effort. A survey of the marketing mix (product, place, price, and promotion) with emphasis on the strategic fit of these items to the overall execution of providing customers the greatest value proposition possible. Extensive use of cases and analysis will be employed.

MBA 571 - International Marketing Management (3 crs.)

Investigates the concerns and factors that surround international marketing strategy on a global scale. Focuses on assessing opportunities in international markets, marketing strategy development in relation to the international marketing environment, and measuring global market needs.

MBA 575 - Global Supply Chain Management (3 crs.)

Starts by exploring the strategic nature of the global supply chain. The class will illustrate the impact of globalization on the business decisions for demand fulfillment, e.g. procurement, location, and distribution. Investigates how global supply chains utilize global markets for both supply and demand. Shows how enhanced information systems can lead to decreased costs and more efficient outcomes. Explains how global supply chain partners can be evaluated. Deliberates efficient organizational structures for fulfilling global demand. Shows global risk and provides risk management tools to mitigate. In addition to being exposed to the theory, case studies will be used to further reinforce the material's application in practice.

MBA 577 - Supply Chain Management (3 crs.)

Introduces an integrated enterprise approach of flow of goods and services from suppliers to customers (supplier relationship, procurement, operations management, inventory control, logistics and transportation, distribution, and customer service). Every topic in each area is being discussed in the context of integrated flow of goods and services from suppliers to customers and continuous flow of information from the customers to the suppliers. Covers the issues facing managers of import-export firms, trading companies, international service companies, and multinational corporations.

MBA 593 - Strategic Management (3 crs.)

Examines strategic analysis and decision making under conditions of dynamic uncertainty, with a focus on cross-functional integration and the management of processes and change. The importance of achieving a fit between the internal and external environment for organizational survival and success is a central issue.

MBA 594 - Selected Topics

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

MBA 595 - Selected Topics (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

MBA 596 - Business Practicum (3 crs.)

The business practicum provides students an opportunity to apply academic principles in a professional work environment, and in turn to apply experiences from the work environment back to the classroom. Students enrolled in the business practicum will take a thoughtful approach to documenting experiences at work and placing them into an appropriate theoretical context. They will also complete a work-related research project, which allows them to deeply examine a work-related issue using academic theories and insights.

MBA 599 - Independent Studies (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

MGT - Management

MGT 431 - Corporate Entrepreneurship (3 crs.)

Examines the need for entrepreneurship in a corporate setting. Companies must be faster, more flexible, more aggressive and more innovative in order to maintain their competitive edge. In other words, they must be more entrepreneurial. Topics will include the need for speed, adaptability, and innovation in order to maintain a competitive edge. Covers many entrepreneurial issues and controversies, and students will be challenged to develop and defend their positions regarding these matters. This is an application-oriented course. Students will apply concepts, tools, and frameworks in a series of real world cases and contexts.
Prerequisites: ACC 201, FIN 311, and MGT 305.

MGT 432 - Entrepreneurship (3 crs.)

Focuses on the concepts, skills, and know-how, information, attitudes, and alternatives relevant for start-up and early-stage entrepreneurs and entrepreneurial managers. A difficult and complex course with two fundamental objectives: To teach the use of entrepreneurial perspective in order to make better decisions and increase the odds of success; and teach effective entrepreneurial and general management practice from the perspectives of the founder and the vital stakeholders who can make a substantial difference in

the ultimate success or failure of the entrepreneurial process. Central focus is the critical role of opportunity creation and recognition, as the principal success factor in new enterprise formation and building. Especially relevant for aspiring entrepreneurs bent on launching and growing a business.

Prerequisites: MGT 337 and MGT 433.

MGT 433 - Small Business Management (3 crs.)

Studies the concerns and trends unique to small businesses. Emphasis on the profitable operation of an ongoing small business. Designed for students who are primarily interested in owning and managing the small business enterprise. Case analysis and analysis of actual small business operations will be used. Consideration will be given regarding how to market and produce new and existing products and how to determine pricing and demand elasticities. Basic objective to enhance the students' probability of successfully running and growing a small business by mixing a variety of instructional exercises including the textbook, Internet exercises, a simulation, and a promotional newsletter or brochure. *Prerequisites: ACC 201, FIN 311, MGT 305, MKT 305.*

MGT 447 - Business and Society (3 crs.)

Examines role of business in a social system including interrelationships with government, the community, employees, and other major publics. A major focus is social responsibility of business. Consideration given to such areas as international business, business ethics, pollution, and impact of governmental regulations. *Prerequisite: Senior status or departmental permission.*

MGT 450 - Negotiation (3 crs.)

Designed to provide students with skills needed to approach negotiation and bargaining situations with confidence. This includes providing frameworks for the analysis conflict and its origins, knowledge about one's own tendencies in negotiation, and a chance to experiment with negotiating techniques in a variety of contexts. Topics include: integrative and distributive negotiations, individual differences in bargaining styles, coalitions, team negotiations, negotiating through agents, and ethical issues in negotiation. Content is delivered through readings, cases, and lecture, however, considerable emphasis is placed on in- and outside class negotiation simulations and subsequent classroom discussion. *Prerequisites: MKT 305, FIN 311, MGT 305, and senior status.*

MGT 470 - International Management (3 crs.)

Study of the unique problems associated with the management of firms operating in an international environment. Focus on the strategic and comparative issues. *Prerequisite: MGT 370 or departmental permission.*

MGT 490 - Selected Topics in Management (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

MGT 497 - Strategic Management (3 crs.)

Examines strategic decision making under conditions of dynamic uncertainty, with focus on integrating the domains of the various majors in the college to facilitate understanding of each employee's and each discipline's role in the total organization. Importance of achieving a fit between the internal and external environment for organizational survival and success is a central issue. Consideration given to influence of social, demographic, technological, political/legal, economic, and global environments, as well as industry environment of competitors, buyers, suppliers, and substitutes. Course is cross-functional capstone course for all business majors. All students expected to participate in designated

AACSB International student learning outcome assessments.

Prerequisites: MKT 305, FIN 311, SCM 330, MGT 305, Senior standing.

MGT 498 - Strategy Implementation (3 crs.)

Examines the challenges of implementing strategies in multinational firms (MNEs). Successful firms today are distinguished not by those whose planning is stellar but those who are able to implement a stellar plan. Designed to provide students with a more detailed application of strategy concepts and organizational challenges that impact the implementation process. Course is cross-functional capstone course for management concentration business students. *Prerequisites: MKT 305, FIN 311, SCM 330, MGT 305, MGT 497 (or concurrent), and Senior standing.*

MIS - Management Information Systems

MIS 420 - Telecommunications and Distributed Processing (3 crs.)

Examines technology, organization, and operations of telecommunications and distributed data processing systems. Topics discussed include hardware/software facilities, transmission systems, system design considerations, and network configurations. Hands-on exercises and case studies used to illustrate the application of telecommunication and distributed processing technology. *Prerequisite: MIS 344 or permission of instructor.*

MIS 442 - Electronic Commerce and Technology Integration (3 crs.)

Covers the Internet and electronic commerce concepts related to three specific areas: business operations and management, technology utilization, and industry-specific applications such as finance and marketing. Class lectures and hands-on application development applied to the examination of business and technical issues involved in designing, implementing, and managing business operations and commerce via electronic means, including the Internet. *Prerequisite: MIS 355 and upper division status.*

MIS 446 - Applied Project Management (3 crs.)

This senior capstone course provides an in-depth coverage of the analysis, design, and development of projects within the various environments including business. Cooperative project teams will propose, design, and build solutions for selected academic or business applications. Coverage includes: analysis of current project requirements, management of project activities, design of proposed solution, activity scheduling, establishment of practical quality controls, publication of project documentation, project delivery and closure. Project management concepts, earned value management, and brainstorming techniques will be covered with related software introduced. *Prerequisite: Senior status.*

MIS 490 - Selected Topics in Business Information Systems (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

MKT - Marketing

MKT 430 - Marketing Research (3 crs.)

In-depth study of the tools of marketing research, including methodology and techniques used in measuring characteristics of markets for products and services. Topics include the research process, data collection, sampling, data analysis, and presentation of results. Contains hands-on development of capabilities to study characteristics of the marketplace. *Prerequisite: MKT 305, MKT 306, SCM 200, or departmental permission.*

MKT 490 - Selected Topics in Marketing (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses. *Prerequisite: Senior standing.*

MKT 495 - Marketing Analysis and Strategy Development (3 crs.)

Capstone synthesis course for marketing majors. Requires students to apply information and skills learned in business core and marketing courses to case situations and research projects. Critical thinking, use of marketing research, and strategic decision making are stressed. Emphasizes the use of written and oral communication skills as part of the marketing core requirements. *Prerequisites: MKT 305, MKT 306, MKT 430, or departmental permission.*

MUS - Music Theater Arts**MUS 490 - Selected Topics in Music (1-3 crs.)**

Provides the opportunity for the department to offer courses in areas of departmental major interest not covered by the regular courses.

PHL - Philosophy**PHL 490 - Selected Topics in Philosophy (1-3 crs.)**

Provides the opportunity for the department to offer courses in areas of departmental major interest not covered by the regular courses. *Prerequisite: Instructor's option.*

PHY - Physics**PHY 411 - Quantum II (3 crs.)**

Introduction to physical concepts and mathematical formulations of nonrelativistic quantum mechanics. Enables a detailed study of the Schrodinger Equation and its properties. The Schrodinger Equation is solved exactly for the particle in a square well potential, the simple harmonic oscillator, and the hydrogen atom. Both perturbation theory and variational calculation are developed as methods for handling more complicated systems. Spin is introduced as an ad hoc concept and the properties of simple magnetic systems studied. Heavy emphasis on applications to simple systems. Three periods lecture/week. *Prerequisites: PHY 311, MAT 318, and MAT 322 (at least concurrently).*

PHY 421 - Electricity and Magnetism II (3 crs.)

A continuation of Electricity and Magnetism I, treating some of the same topics but with an increased sophistication. Provides a solid foundation in one of the core subjects of the discipline. Topics include: electrodynamics and Maxwell's equations, conservation laws, electromagnetic waves and relativistic electrodynamics, electromagnetic waves, potentials and fields of moving charges, radiation by moving charges, special relativistic treatment of electrodynamics, electromagnetic radiation by a point charge. *Prerequisites: PHY 321 and MAT 322.*

PHY 431 - Mechanics II (3 crs.)

Intermediate course in the treatment of Newton's laws of motion, vector analysis, and rectilinear and curvilinear motion in a plane, as well as study in areas of statics and dynamics, including concurrent and non-concurrent forces, movements and torques, energy, rotational motion, moments of inertia and oscillatory motion. Three periods of lecture/week. *Prerequisites: MAT 213, MAT 318, MAT 322 (at least concurrently), and PHY 331.*

PHY 450 - Quantum Materials (4 crs.)

Lecture/lab course covers material topics in modern solid state physics with an emphasis on applications to nanotechnology. Topics covered include carbon nanotubes, organic conductors and semiconductors, photonic crystals, and microfluidics. Topics in biological and self-assembled systems including, biomolecular motors, motor proteins, and the organic-to silicone interface are also covered. Techniques for manipulating and characterizing materials at the nanoscale are also covered in both the lecture and the laboratory. *Prerequisites: PHY 311 and MAT 322, or CHM 363 and PHY 461, or permission of the instructor.*

PHY 461 - Mathematical Physics (3 crs.)

Introduces some of the many mathematical concepts used routinely by theoretical physicists. Specific topics are left to the discretion of the instructor but can include such subjects as elements of differential geometry, complex analysis, or methods for solving integral and differential equations. *Prerequisite: PHY 301.*

PHY 471 - Computational Physics (4 crs.)

Introduces the use of sophisticated numerical techniques to solve physical problems. Topics include: approximation methods, numerical integration, ordinary and partial differential equations, random processes, spectral analysis, and Monte Carlo methods. *Prerequisites: PHY 301, CSC 110, and MAT 322.*

PHY 481 - Atoms and Photons (3 crs.)

Investigates the structure of matter at the atomic level, the free photon field and their mutual interaction. Possible topics are: hydrogen atom review; generalized angular momentum theory; radial wave functions and self-consistent field solutions; coupling schemes and atomic eigenstates; general excitation and decay dynamics; quantization of the free EM field; coherent and incoherent states of the photon field; atom-photon interaction terms, gauge representations; 1st order process: e.g. absorption and emission; and higher order processes: e.g. 2-photon decay. *Prerequisites: PHY 301, PHY 311, and PHY 321.*

PHY 485 - Optics (4 crs.)

Both geometrical and physical optics and applications. Optical instruments, wave propagation, interference diffraction, polarization, and atomic molecular spectra are studied. Spectroscopes, spectrometers, polariscopes, photometers, and interferometers are some of the instruments used. Three periods lecture and two periods lab/week. *Prerequisites: MAT 213, MAT 318, MAT 322, and PHY 321.*

PHY 493 - Selected Topics in Physics (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

PLS - Political Science**PLS 431 - Pennsylvania Local Government (3 crs.)**

Concerns the structure and administrative functions of local governments in Pennsylvania. Extensive emphasis placed on analyzing local governmental functions and problems emanating from the jurisdictions' political, social, and economic environments. *Prerequisite: 9 hours in political science or permission of instructor.*

PLS 501 - Organizational Theory and Behavior (3 crs.)

Examines organization theory relevant to the administration and leadership in complex organizations. Focus is on topics of bureaucracy and development of administrative thought; human behavior in organizations including individual motivation, group and interpersonal dynamics, and leadership modes; organization

structure, process, and dynamics; organizational development and change; and emerging perspectives in the field.

PLS 502 - Human Resources Management (3 crs.)

Case study course reviewing personnel administration integratively as an administrative, behavioral, and technical area. Role of the line manager in personnel administration is covered, as well as the technical roles of central personnel agency and the operating personnel office.

PLS 503 - Foundations of Public Budgeting and Finance (3 crs.)

Provides knowledge base required to understand the principles underlying public sector budgeting and decision making. Public sector decision models are explained and the theory of public goods examined in depth. Evolving techniques for satisfying public needs through the private sector (e.g. privatization) are investigated and outcomes analyzed.

PLS 504 - Ethics for Public Service Managers (3 crs.)

Examines specific contemporary ethical concerns in the public sector and the ethical conduct required by statutes and codes of conduct. Appropriate case studies discussed, emphasizing the constantly changing standards in the public sector.

PLS 511 - State Government (3 crs.)

Studies state governments in the American federal system and analyzes state government institutions and processes with special reference to Pennsylvania.

PLS 512 - Intergovernmental Relations and Programs (3 crs.)

Examines the developing area of intergovernment relations among federal, state, and local governments. Special emphasis placed upon the work of the Advisory Commission on Intergovernmental Relations and implementation where feasible by state and local governments.

PLS 521 - Collective Bargaining and Labor Relations in the Public Sector (3 crs.)

Reviews whole area of relations between public employees and public employers and impact on public personnel administration. Some guidelines used for past contractual arrangements are covered.

PLS 551 - Planning and Public Policy (3 crs.)

Examines relationship between the planning process and public policy including the inputs into the development of public policy as well as legal and other constraints. Using the current national budget priorities as a national plan and in-depth examination and reconciliation of these priorities is carried out in view of political, social, and economic constraints.

PLS 561 - Administrative Law (3 crs.)

Study of the law concerning the powers and procedures of administrative agencies. These governmental bodies that affect the rights of private and public parties through either adjudication or rule making are compared to and contrasted with the judicial, legislative, and executive processes using the case method.

PLS 591 - Selected Topics in Political Science (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

PSY 595-597 - Selected Topics

PLS 601 - Research Methods (3 crs.)

Survey of the research process including preparation of a research design, use of theoretical framework, and testing of hypothesis by

gathering and analyzing data. Recommend the student complete this course as early in the graduate program as possible.

PLS 603 - Public Policy Analysis (3 crs.)

Briefly examines the policy making and policy implementation processes as they relate to the analysis of public policies. Major focus is upon results-oriented management techniques and a number of specific quantitative policy analysis techniques.

PLS 605 - Applied Management Techniques in Public Administration (3 crs.)

Requires students to demonstrate their ability to successfully resolve workplace situations by utilizing principles and concepts of public management as presented in the core and elective courses of the M.P.A curriculum. Employing the case study method, and additional reading, the principal focus requires the students as individuals and in teams to work with the development and implementation of public policy. Course takes an application and problem-solving approach designed to develop the practical management skills required in the current public administration workplace.

PLS 611 - Internship I (3 crs.)

Opportunity to practice public administration theory and concepts as participant and an observer in the process. Placement on a limited basis in a government or nonprofit activity enhances the student's preparation in the field.

PLS 612 - Internship II (3 crs.)

Opportunity to practice public administration theory and concepts as participant and an observer in the process. Placement on a limited basis in a government or nonprofit activity enhances the student's preparation in the field.

PLS 621 - Thesis I (3 crs.)

PLS 622 - Thesis II (3 crs.)

PSY - Psychology

PSY 500 - Advanced Research Design and Statistics I (3 crs.)

Concerned with scientific method to the investigation of behavior. Research methods and experimental design and statistics are reviewed along with a survey of the more recent significant developments in the field of psychology. Use of computer statistical packages to analyze data is emphasized. Students demonstrate competency in descriptive statistics. *Prerequisite: Students are required to take and pass a competency exam prior to entry into the course. Contact the professor or departmental secretary for test procedures.*

PSY 501 - Advanced Research Design and Statistics II (3 crs.)

Second component of the research design and statistics sequence is concerned with the scientific method in the investigation of behavior. Advanced research methods and experimental design and statistics are reviewed along with a survey of the more recent significant developments in the field of psychology. Use of computer statistical packages to analyze data is emphasized. Students demonstrate competency in multivariate statistics. *Prerequisite: PSY 500.*

PSY 512 - Theories of Learning (3 crs.)

Examines the explanations of human learning processes offered by various behavioral and cognitive theorists. Classical and contemporary theories and applications are presented dealing with topics such as conditioning, motivation, memory, and problem solving.

PSY 515 - Theories of Personality (3 crs.)

Explores theories, issues, and research in personality, and encourages the psychology graduate student to develop his or her own pragmatic orientation.

PSY 516 - Motivation (3 crs.)

Examines and compares different theories of motivation. Basic motives such as hunger, thirst, sex, and aggression in humans and animals examined. In addition, more complex motives discussed in light of decision theory.

PSY 518 - Introduction to Behavior Analysis (3 crs.)

Study of applied techniques of modifying behavior and cognition. Includes stimulus control processes, reinforcement theory, modeling, extinction, desensitization, counter-conditioning, cognitive restructuring, stress inoculation training. *Prerequisite: PSY 500.*

PSY 519 - Life Span Psychology (3 crs.)

Lifespan development provides information about developmental processes from conception through adulthood. Interaction of environmental and genetic factors stressed. Theoretical points of view are presented. *Prerequisite: undergraduate course in child development and/or permission of the instructor.*

PSY 527 - Studies in the Psychology of Adolescence (3 crs.)

Systematic study of physical, behavioral, and psychological development of the individual from puberty to emerging adulthood.

PSY 529 - Psychology of Successful Aging (3 crs.)

Focuses on process of aging during later years of the life span. Developmental approach provides basis for the systematic study of aging. The interaction of the physiological, psychological, emotional, intellectual, and social aspect of aging are emphasized. *Prerequisite: PSY 519.*

PSY 530 - Studies in the Psychology of the Exceptional Child (3 crs.)

Concerned with findings of significant studies on the exceptional child. Emphasis given to the contributions of research dealing with characteristics of the exceptional child, identification, ways of meeting special needs and implications for child and those who work with the child.

PSY 531 - Advanced Cognitive Psychology (3 crs.)

In-depth analysis of new issues within the field of cognitive psychology is focus. Sample content includes models of memory, processes of cognition, implicit versus explicit memory, and problem solving.

PSY 533 - Advanced Social Psychology (3 crs.)

Study of how people make sense of others and of themselves; how ordinary people think about people, and how they think they think about people.

PSY 534 - Survey of Research in Abnormal Behavior (3 crs.)

Review research and theoretical contributions to the understanding of abnormal behavior, with primary emphasis on discussion of recent research findings regarding the etiology of various mental disorders.

PSY 535 - Behavioral Assessment (3 crs.)

A study of the conceptual background and practical application of behavioral assessment techniques. The focus will not be on the diagnosis of a particular form of psychopathology, but rather on the function a particular behavior or set of behaviors is serving.

Methods ranging from interviews with parents and direct care staff to the experimental analysis of function will be discussed, with emphasis on the idea that once function has been identified, it will be possible to design a behavioral intervention to treat a behavioral excess based on its function(s), and thus, improve the effectiveness and efficiency of behavioral treatment. *Prerequisite: PSY 518.*

PSY 536 - Behavioral Research and Ethics (3 crs.)

A study of two related topics necessary for the development of competency in developing and implementing behavioral interventions. The first is single-case research design, which is the primary research design utilized for applied research in behavior analysis as well as implementation of interventions to treat behavioral deficits and excesses in the practice of applied behavior analysis. The second topic is the code of ethics developed by the field for research in and the practice of applied behavior analysis. *Prerequisite: PSY 518.*

PSY 540 - History of Psychology (3 crs.)

Reviews history of psychology from its roots in philosophy through its transformation into a science. Included is a critical examination of major issues, assumptions, and schools of thought.

PSY 543 - Behavioral Treatment and Systems Support (3 crs.)

A study of the conceptual background and practical application of behavioral treatment techniques. With behavioral excesses, it is essential to determine the function that the behavior or set of behaviors is serving via behavioral assessment. Then, a functional treatment can be created to decrease excesses, which will be more effective and less restrictive than treatment that ignores function. Treatments to increase existing deficits in behavior will also be considered. Finally, considerations with regard to support of behavioral interventions within different settings (home, school, etc.) will be examined, including ethical considerations. *Prerequisite: PSY 518.*

PSY 565 - Human Factors (3 crs.)

Focuses on the application of psychological principles of human behavior, perception, and cognition to real-world environments. Topics include improving workplace and transportation safety, improving human-computer interaction, and discussing general ways humans can work more easily and naturally with complex technologies in today's society.

PSY 570 - Seminar in Cognitive Science (3 crs.)

Cognitive Science is a multi- and inter-disciplinary field that draws primarily from the perspectives of cognitive psychology, artificial intelligence, linguistics, and philosophy that converge on a set of core questions addressing the nature of the human mind. Seminar involving reading primary sources of the various perspectives as well as the overarching cognitive science literature, discussion of methods and findings, and understanding and developing applications to real-world problems using computational or information processing approaches.

PSY 590 - Introduction to Group Dynamics (3 crs.)

Examines the theory and experiences of group interaction. Observation and participation in face-to-face groups of varying structures and functions are provided. Theories of group development and observational systems and techniques applicable in educational, business, and institutional settings are examined. Selected topics include goal analysis, functional group structures, leadership influence, conforming norm pressures, deviant behaviors, and communication network patterns.

PSY 594 - Selected Topics in Psychology (3 crs.)

Opportunity to study concepts and research in areas of psychology not covered by the regular course of study in a seminar setting. Areas covered are those in which instructors have special expertise and in which there is a special student request.

PSY 595 - Selected Topics in Psychology (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

PSY 596 - Selected Topics in Psychology (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

PSY 597 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

PSY 598 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

PSY 612 - Thesis I (3 crs.)

Designed to provide master's degree candidates with opportunity to conduct a major research project. A research proposal, literature review, and a pilot study required. First in a two-course sequence. *Prerequisite: PSY 500.*

PSY 613 - Thesis II (3 crs.)

Second of a two-semester sequence of graduate courses designed to provide master's degree candidates an opportunity to conduct a major research project. Students implement the research proposal designed in Thesis I, collect data, complete a statistical analysis, write a research report, and make an oral presentation. Students experience the procedure and format of conducting a research project that might be prepared for publication in a psychological journal. *Prerequisite: PSY 612.*

PSY 621 - Field Experience I (3 crs.)

Field experience in a governmental, industrial, or institutional setting providing supervised professional experiences. Students must accumulate a minimum of 150 clocked hours at a site during one academic semester. *Prerequisites: PSY 500, PSY 501.*

PSY 622 - Field Experience II (3 crs.)

Field experience in a governmental, industrial, or institutional setting providing supervised professional experiences. Students must accumulate a minimum of 150 clocked hours at a site during one academic semester. The field experience may take place in the same setting as PSY 621, although it must involve a different project. *Prerequisites: PSY 500, PSY 501, PSY 621.*

RDG - Reading**RDG 413 - Teaching Reading to English Language Learners (3 crs.)**

Designed to address teaching reading and writing to the English language learner in a non-ESL classroom; address the concerns of teachers who encounter students in their classrooms who are learning English; explore theories about first- and second-language acquisition; introduce classroom best practices in literacy as they relate to learners of English; and support teachers in developing an understanding of the basic principles of teaching and assessing English language learners with practical suggestions for assisting

students in learning to cope in their new culture. Course is reserved for reading minors and master's of reading students.

RDG 422 - Studies in Children's Literature (3 crs.)

Designed to incorporate children's literature as a method for examining the relationships between authors' writing processes, curriculum, and pedagogy in the elementary classroom. Emphasizes current literacy research related to writers' craft in order to demonstrate a wide range of purposes and styles of writing and how various genres can be used to develop literacy skills.

RDG 443 - Reading Measures and Interventions in PK-4 (3 crs.)

Focuses on assessment methods, including observation, informal, and formal assessment measures to diagnosis and describes stages of reading development among readers, specifically prekindergarten through fourth grades. Uses assessment data to identify and implement literacy instruction for small groups and individual learners. Participation in an education field experience will be required. *Prerequisites: ECH 253, RDG 323, and RDG 363.*

RDG 520 - Tutoring Secondary Students (3 crs.)

Designed to give master's degree candidates experience working with upper-grade students who are having difficulty becoming effective readers and writers. Candidates in this course will tutor 3-5 freshman students once per week for the course duration. In addition, student's reading and writing abilities will be assessed at the beginning and end of the course.

RDG 524 - English Language Learners: Diversity's Impact on Literacy Instruction in a Standards Aligned System (3 crs.)

Designed to address the impact that linguistic and cultural diversity has on literacy instruction in a Standards Aligned System (SAS). Foundational theory in both first and second language acquisition and instruction is explored. In addition, this course investigates what influences the learning process, how instruction best aids that process, and how to utilize the SAS to enhance student learning for speakers of languages other than English. This course explores the needs, experiences, values, and beliefs of culturally and linguistically diverse learners. Course is reserved for master's of reading students.

RDG 528 - Foundations of Literacy Development (3 crs.)

Provides a comprehensive overview of factors related to literacy development and explores the implications of knowledge about the reading/writing process for effective instruction. Topics considered include such areas as: research knowledge about literacy processes, early literacy experiences, comprehension, vocabulary/concept development, word identification, literature for reading instruction, microcomputers and literacy, instructional materials, classroom organization for effective literacy instruction, and strategies for instruction/assessment in reading.

RDG 529 - Reading and Reasoning Beyond the Primary Grades (3 crs.)

Examines comprehensively all aspects of literacy instruction for older children and adults. Special attention given to topics having unique relevance to older readers such as: mastery of expository text structures, development of independence in monitoring and controlling one's own reading, building of vocabulary concepts, and development of positive attitudes toward print.

RDG 532 - Diagnosis and Assessment in Reading (3 crs.)

Explores varied means for obtaining information about children's abilities in using print as a basis for aiding further development. Critically examines the strengths and weaknesses of assorted reading/writing assessment strategies. Emphasis will be given to those strategies that are process-oriented and have the most direct

application to instruction. Students will practice using informal observation techniques and varied measurement instruments as a basis for preparation of a clinical case report. *Prerequisites: RDG 528 and RDG 529 or permission of instructor.*

RDG 533 - Advanced Diagnosis and Assessment in Reading (3 crs.)

Further examines issues introduced in RDG 532 with emphasis upon refining and expanding expertise in observation of literacy development. Preparation of a clinical case report required. Other topics investigated include: current issues in literacy assessment, new strategies for assessment, organizing classrooms for optimal diagnosis and instruction, recent literature by reading researchers with implications for assessment. *Prerequisite: RDG 532.*

RDG 534 - Laboratory Practicum in Reading (3 crs.)

Provides experience in facilitating children's literacy development in a clinical setting with guidance and support from university faculty. Assessment/instructional strategies are practiced and discussed as a means of building insights about literacy processes and individual developmental needs. *Prerequisite: RDG 532.*

RDG 535 - Seminar in Literacy, Language, and Reading (3 crs.)

Explores current understandings of literacy processes with opportunities for in-depth study of topics of special interest and relevance. A capstone course, students reflectively examine concepts introduced in earlier courses including possibilities and problems of their application in varied instructional settings. Practice in curriculum leadership roles such as writing for publication and planning/implementation of in-service sessions provided. *Prerequisites: RDG 532, RDG 534, and two other graduate-level courses in reading.*

RDG 537 - Brain Based Strategies for Literacy Learners Experiencing Difficulties (3 crs.)

Focuses on differentiating reading and writing instruction within various settings, including supplemental and classroom, for meeting the needs of struggling learners. Includes techniques for using intervention team meetings to select appropriate services, collaborating with teachers across intervention programs, and using assessment to monitor learner's progress.

RDG 554 - Practicum in Reading (3 crs.)

Addresses a series of practical issues Teacher Leaders face on a daily basis. Topics include teaching adults, how to work with administrators, parents, and trainers of teacher leaders in coming years. Field site visits are included. *Prerequisite: Master's degree.*

RDG 555 - Practicum in Assessment (3 crs.)

Prepares Reading Recovery teachers to learn to observe and record the reading and writing strengths of individual children. Field site visits are included. *Prerequisite: Master's degree.*

RDG 594 - Selected Topics in Reading (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

RDG 599 - Independent Study (2 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

RDG 601 - Language Development Theory (3 crs.)

Focuses on theory and current research related to effective Reading Recovery instruction. Examines and applies theoretical principles of learning and literacy learning to their practice. Evaluates and relates

theories of literacy learning, thinking, and teaching to the process of becoming literate.

RDG 602 - Reading Thoughts and Processes (3 crs.)

Reading Recovery is a system intervention that changes how educators think about learning and instruction. Teacher Leaders are key to creating systemic change. Examines recent developments and research regarding issues Teacher Leaders are most likely to face when implementing Reading Recovery Programs in their respective sites.

RDG 607 - Reading Recovery Training for Teachers I (3 crs.)

Assists teachers in developing an understanding of the Reading Recovery procedures in order to select from these procedures to meet individual learning needs. Lesson analysis, specific strategies, and charting student progress are important components of course. *Prerequisite: permission of instructor.*

RDG 608 - Reading Recovery Training for Teachers II (3 crs.)

Refines and expands the Reading Recovery teacher's level of awareness and understanding of how to effectively implement the Reading Recovery Program. Prerequisite: permission of instructor.

RDG 609 - Internship (3 crs.)

Provides opportunity to gain practical experience in chosen career area.

RDG 612 - Thesis I (3 crs.)

Students identify, explore, and synthesize current information regarding a topic of special significance in literacy education. Work guided by reading faculty and must be approved by faculty committee. All students expecting to undertake advanced graduate studies in reading are urged to elect the thesis option.

RDG 613 - Thesis II (3 crs.)

Continuation of RDG 612.

SCED - Science Education

SCED 510 - Foundations of Science Education in the United States (3 crs.)

Includes the historical and philosophical foundations of secondary education in the United States with particular emphasis on science education (i.e. the Nature of Science). Contemporary issues such as federal and state educational policies and curriculum standards, standardized testing and accountability, and professional expectations for teachers will also be discussed. Students will also complete a minimum of 25 hours of observations in a secondary science classroom.

SCED 520 - Research and Contemporary Issues in Science Education (3 crs.)

Surveys various research approaches in science education including quantitative, qualitative, and mixed methods. Emphasis will be placed on research characterizing contemporary issues such as inquiry-based instruction, effects of curriculum standards and standardized testing, and nature of science instruction. Action research, research for the purpose of improving one's own practice, will also be included and each student will design a project to be completed throughout the remainder of the Master of Arts in Science Teaching program. Students will also complete a minimum of 25 hours of observations in a secondary science classroom. *Prerequisite: SCED 510.*

SCED 530 - Instructional Strategies and Technology in the Science Education (3 crs.)

Assists the student with understanding the variety of strategies and philosophies behind those strategies for presenting instruction. Furthermore, specific instructional models related to science education (learning cycle, 5E, and inquiry based instruction) will be utilized. Students will develop their own instructional philosophy in concert with the national efforts in the science education field through readings, discussions, classroom observations, as well as simulated and real teaching activities. Students will be prepared to design coherent instruction through curriculum design, unit planning and individual daily lessons. Also included within this course will be understanding how the instruction, assessment, evaluation process occurs and results in a student grade. Students will also complete a minimum of 25 hours of observations in a secondary science classroom. *Prerequisites: SCED 510 and SCED 520.*

SCED 540 - Assessment in Science Education (3 crs.)

Includes all facets of the assessment process within the science classroom. Standardized achievement, diagnostic and aptitude tests, as well as teacher constructed tests will be examined. Emphasis will be placed on assessing student's conceptual understanding within the sciences through a variety of formative and summative assessment strategies. Also included within this course will be understanding how the instruction, assessment, evaluation process occurs and results in a student grade. Students will also complete a minimum of 25 hours of observations in a secondary science classroom. *Prerequisite: SCED 510, SCED 520 and SCED 530.*

SCED 550 - Safety and Welfare in Science Education (3 crs.)

Surveys the primary safety concerns in science instruction with emphasis on chemical safety, safety equipment and procedures, and legal and ethical considerations for using live and preserved organisms in the classroom and field. Principles and legal requirements for classroom design and how classrooms and laboratories must be modified to accommodate students with learning and physical disabilities will also be included. Students will also complete a minimum of 25 hours of observations in a secondary science classroom. *Prerequisite: SCED 510, SCED 520, SCED 530, and SCED 540.*

SCED 560 - Accommodating all Students in Science Teaching (3 crs.)

A survey course that examines the intellectual, physical, sensory and social-emotional differences of individuals as they pertain to learning processes. It will also address the needs of English Language Learners (ELL) in the science classroom. It delves into how to best accommodate these students within a science classroom so that they can have the opportunity to be engaged in all aspects of learning science. Students will also complete a minimum of 25 hours of observations in a secondary science classroom. *Prerequisite: SCED 510, SCED 520, SCED 530, SCED 540, AND SCED 550.*

SCED 590 - Student Teaching and Science Education Practicum (3 crs.)

This capstone course in the Master of Arts in Science Teaching (MAST) program consists of two parts. The first part is a 12-week student teaching experience where students assume incrementally more responsibilities for lesson planning, assessment, classroom management, and other teacher-related duties under the guidance of an experienced mentor teacher and a university supervisor. Assignments during this time include a comprehensive unit plan and an assessment portfolio. The second part of the course is a

four-week period where students complete and present their professional portfolios and action research projects to a panel of secondary science teachers and university professors. *Prerequisites: SCED 510, SCED 520, SCED 530, SCED 540, SCED 540, SCED 550, and SCED 560.*

SCM - Supply Chain Management**SCM 420 - Global Logistics Systems (3 crs.)**

Studies the impact of operations management decisions in order to fulfill demand e.g. location, production, and transportation on a global scale. Investigates how logistical systems impact operations strategies to open new markets for supply and demand. Delves into the implications of international operations and logistics strategies based on enhanced information systems and their impact on transportation costs and value added activities. This course provides participants with an examination of the preconditions of globalization and its effects on logistics operations management decisions with regard to performance measures, risk management, and organizational structures. In addition to being exposed to the theory, case studies will be used to further reinforce the material's application in practice. *Prerequisites: SCM 330 or permission of instructor.*

SCM 510 - Introduction to Logistics and Transportation Management (3 crs.)

Introduces students to the theories, concepts, and practice of logistical operations needed to support the supply chain. It investigates the rise of logistics management from a minor business function to its current role as the backbone of the supply chain. Covers issues related to state of the art methods of delivering goods and services to customers through efficient inventory management, materials flow, transportation, warehousing, and procurement.

SCM 515 - Procurement Management (3 crs.)

Designed to give students a foundation in the theory and practice of purchasing and sourcing. Presented in the course are concepts, procedures, and issues related to negotiations, sourcing, pricing, procurement, cost management, and global supply management. Strategies and challenges facing purchasing and sourcing in a global environment to maintain competitive advantages are considered.

SCM 555 - Supply Chain Quality Management (3 crs.)

This course introduces students to the principles, concepts, and strategies needed for managing quality in a manufacturing or a service environment. Historical perspectives and theories of quality management are considered. The design of quality systems is studied from a market, customer, and manager's prospective. State-of-the-art skills and tools for quality assessment are covered providing insight into the implementation and maintenance of quality systems. The origins and principles of continuous improvement and their impact on quality management are explored.

SCM 570 - Supply Chain Management Theory and Practice (3 crs.)

Covers theory, principles, and practices in designing, planning, and operating a supply chain. The course considers the historical development, impact, and role of supply chain management in today's society. It investigates the role of information and transportation networks within the supply chain. Also discusses how firms develop and formulate strategy and design of their supply chains to improve competitive advantage.

SCM 590 - Warehousing and Distribution Management (3 crs.)

Considers the theory and best practices for designing, operating, managing material handling systems as they relate to warehousing. Discusses warehouse location, design, and work force issues with regard to warehousing operations. It also considers warehousing strategies that minimize supply chain inefficiencies and allows product accumulation, consolidation, and customization. Addresses a variety of principles and systems needed to create and manage world-class warehousing.

SOC - Sociology**SOC 410 - Family and Society (3 crs.)**

Focuses on the family as a social institution, a social process, and as an interacting system. Includes emphasis on historical development and interrelationship between the family and society. Major theoretical perspectives are applied to the study of the family. Cross cultural and utopian (U.S.) family movements included.

Prerequisite: SOC 101 or SOC 257.

SOC 435 - Gender, Organizations and Leadership (3 crs.)

Examines the dynamics of gender and leadership in broader social contexts with particular focus on organizational settings. Focuses on the larger realm of women and men working, together or otherwise, in leader-follower situations framed by organizational constraints and concerns. The course examines a wide range of survey data and literature on gender and leadership. Students will learn how to promote a workplace culture of equality, diversity, and inclusion. *Prerequisite: SOC 101 or graduate student status.*

SOC 445 - Sexuality and Sexual Orientation: A Social Approach (3 crs.)

Examines the interrelationship of sexuality and the broader social structure in a variety of settings. Analyzes some of the critical theory on gender and sexuality and applies the lessons learned to issues such as the globalization of sexuality, transgendered and intersexed individuals, sexual exploitation, and sex trafficking. Intentionally not a course on just sexual orientation; also examines the specific issues, opportunities, and threats surrounding the social experiences of G/L/B/T/Q and their allies. Students work together to develop better strategies for female/male sexuality and sexual interaction. *Prerequisites: SOC 101 Introduction to Sociology or permission of the instructor.*

SOC 486 - Qualitative Social Research (3 crs.)

Students will learn techniques of qualitative interviewing and participant observation. Involves basics of ethnographic research, writing field notes, coding and analyzing qualitative data, and writing an ethnographic report. Each student selects individual research question and conducts a field research project of own choice that will reflect own academic interests. Skills learned will be transferable to many disciplines and occupations. *Prerequisite SOC 101.*

SOC 490 - Selected Topics in Sociology (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

SOC 530 - Sociology of Higher Education (3 crs.)

Examines the different social structures, organizations, and communities that make up higher education in the U.S. today. Emphasis is placed upon the history and recent development of higher education models. Examines how the bureaucratic and institutional structures handle many of the issues, including the role of the "liberal arts," governance, distance education, the financing

of higher education, the emergent emphasis on professional/vocational programs, institutional and systemic inequalities, growth of higher education administrative staffs, increasing role of for-profit institutions, the marketing of higher education, and the various "crises" identified by commentators and critics.

SOC 550 - Leadership Theory and Practice (3 crs.)

Overview of theories of leadership historical and contemporary. Emphasis will be on application of theories in pragmatic situations to promote system goals. Understanding of variations in effective leadership models across diverse cultures and subcultures is discussed.

SOC 560 - Leadership, Change, and Innovation (3 crs.)

Analysis of leaders as agents of social change. Leadership characteristics and strategies that have changed the world will be identified through a diverse set of case studies.

SOC 570 - Applied Organizational and Leadership Analysis (3 crs.)

Part of capstone experience that will prepare students to conduct an organizational and leadership analysis during their concurrent internship experience. Students will develop a design for their analysis, present and discuss their designs with other students, meet during their internship to discuss their progress, and present their conclusions. *Prerequisites: SOC 550, SOC 560, PLS501, and PLS601.*

SOC 594 - Selected Topics in Sociology (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

SOC 609 - Sociology Graduate Internship (3 crs.)

Designed to give graduate students relevant leadership experience in the concentration area. All ODL internships are to be approved by the director of the program in semester prior to the start of the internship. *Students would ideally register for SOC 609 and SOC 570 concurrently.*

SPN - Spanish**SPN 400 - Seminar: Advanced Studies in Spanish Language and Literature (3 crs.)**

Detailed examination of specific aspects of Spanish linguistics, Hispanic literature, history, and culture. The seminar may be taken more than once provided that a specific topic is not repeated. *Prerequisite: Permission of instructor.*

SPN 410 - Internship for Students of Spanish (1 cr.)

Contact the department for further information on internships.

SPN 420 - Theory and Practice of Translation (3 crs.)

Introduces various types and tools of oral and written translation and provides extensive practice in translating in professional contexts (such as business, education, criminal justice, medicine, and international politics) and in translating works of literature. A theoretical approach to the problems of translation is also applied.

SPN 490 - Selected Topics in Spanish (3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

SPN 510 - Hispanic Theater (3 crs.)

Intends to help in understanding the complexity of Spanish or Latin American Theater throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature and the social influences that have impacted it.

Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in Spanish.

SPN 515 - Hispanic Poetry (3 crs.)

Intends to help in understanding the complexity of Spanish or Latin American Poetry throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature, and the social influences that have impacted it. Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in Spanish.

SPN 520 - Hispanic Fiction (3 crs.)

Intends to help in understanding the complexity of Spanish or Latin American Fiction throughout the centuries. In a multidisciplinary approach, studies the importance of this literary form, its stature, and the social influences that have impacted it. Students analyze the literary importance of the texts and their political, historical, and sociological impact on the respective cultures that produced them. Films will be included. Taught in Spanish.

SPN 525 - Hispanic Culture (3 crs.)

Intends to expose the students to the complexity of Spanish or Latin American cultures throughout the centuries in a multidisciplinary approach. Studies the importance of different cultural issues from a political, historical, and sociological standpoint, exploring the impact on the diverse cultures of the Hispanic world. Analyzes different texts and films to illustrate these issues. Taught in Spanish.

SPN 530 - Spanish Linguistics (3 crs.)

Deals with the grammatical structure of the modern Spanish language and addresses issues relating to phonetics, syntax, morphology, and semantics, all part of what is commonly referred to as grammar. Lectures grounded in practicality and consider the needs of teachers. Prescriptive norms of the language and the actual use of the language in its dialectal variations, including those found in the United States, will be studied. Practicality further emphasized with applications in the written language that will discuss common errors and pitfalls in this form of expression.

SPN 535 - History of Spanish Language (3 crs.)

Seminar course lets students travel both in time and in space, while considering the evolution of the Spanish language. Starting with Latin, changes systematically studied and analyzed, focusing on the nascent dialectal varieties, their importance, the impact of substrate languages and of others that have influenced what is known as Spanish (Greek, Italian, and Arabic among many others). While the language was in part stabilized thanks to the Academia de la lengua, a body influenced by the French Academie, Spanish has gone through many changes on the American continent, but also in Africa and Asia. Spanish of Latin America, United States, and several countries in Africa and Asia will be explored. Several documentaries complement the seminar.

SWK - Social Work

SWK 420 - Gender Issues for Helping Professionals (3 crs.)

Examines institutionalized gender socialization, current gender issues and controversies, feminist theory for understanding behavior, and guiding principles and practices for helping

professionals. Students encouraged to develop heightened self-awareness about their gender-related attitudes and values for functioning as a helping professional. May be taken for undergraduate or graduate credit. *Prerequisites: SWK 270 or junior status.*

SWK 450 - Social Welfare Policies and Services (3 crs.)

Presents framework for developing and analyzing contemporary social policies and programs. Focuses on current issues and social problems by examining policy and service implications with an emphasis on realist development and change strategies.

SWK 490 - Selected Topics in Social Welfare (1-3 crs.)

Provides the opportunity for a range of topics to explore issues and concerns for the helping professions. Designed for advanced undergraduate and graduate students.

SWK 501 - Principles and Philosophies of Social Work (3 crs.)

Introduces the generalist model for practice, which serves as a base for subsequent social work courses and provides initial understanding of the needs and issues of special populations in relation to social welfare policies and services as well as social work practice. The course provides an introduction to the profession and the M.S.W. program while helping to prepare students for their subsequent field placements. Fifteen volunteer hours are required. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing.

SWK 505 - Understanding Social Work Practice with Diverse Populations (3 crs.)

Focuses on issues of understanding human diversity, risk, societal power and privilege, including issues related to sexism, heterosexism, classism, ageism, religion and spirituality, cultural identity development oppression, risk, resilience, and empowerment. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing.

SWK 510 - Human Behavior in the Social Environment I (3 crs.)

Examines the life span approach to human development with a focus on the interaction between the individual's bio-psycho-social functioning and the social environment. It considers the impact of micro and mezzo (i.e. families and small groups) systems on behavior with particular emphasis given to populations considered to be at risk. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing. *Prerequisite: SWK 501 Principles and Philosophies of Social Work.*

SWK 511 - Human Behavior in the Social Environment II (3 crs.)

Emphasizes 1) the interaction of social and economic forces with young, middle-aged, and older adults and social systems; 2) traditional and alternative theories about systems as they interact with people, promoting and impeding health, welfare, and well-being, in context of human culture and diversity; and 3) knowledge about opportunity structures and how they promote and deter human development and need-meeting. Students evaluate theory and apply it to practice situations. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing.

Prerequisite: SWK 510 Human Behavior in the Social Environment I.

SWK 515 - Social Welfare Policy (3 crs.)

Furnishes students with the orienting knowledge and skills needed to examine social welfare policies and to understand their relevance to social service delivery and social work practice. Approximately

one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing. *Prerequisite: SWK 501.*

SWK 520 - Micro/Mezzo Social Work Practice (3 crs.)

Offers opportunities for applying and studying advanced generalist practice with individuals, families, and groups. Course content is presented in a face-to-face format with web-based supplements. Students will learn and apply intervention skills to their specific area of interest, which enable development of individuals, families, and groups in environment processes for improving social functioning. *Prerequisite: SWK 501; co-requisite: SWK 530.*

SWK 521 - Macro Social Work Practice (3 crs.)

Conceptualizes macro social work as the profession that brings about social change. The course extends from understanding theories about communities and organizations to assessment and practice. Students will focus on analysis of the community as a social system, common strategies for producing change in community work, and the nature of formal organizations as environments through which social services are provided in the community, and the knowledge and skills necessary to affect change within organizations. Students will examine the role of a macro social worker as program developer, program administrator, and organization developer. This course will meet two-thirds in the classroom with one-third of the schedule involving online work. *Prerequisite: SWK 520; co-requisite: SWK 531.*

SWK 525 - Research Methods (3 crs.)

Introduces research concepts, procedures for conducting research, and their application to social work practice. Advanced knowledge of scientific inquiry, the ethics that guide research, and the roles of social workers as researchers are also covered. Both qualitative and quantitative methods of collecting and analyzing data are given major attention. Students learn the procedure for developing a research proposal. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing.

SWK 530 - Field Practicum I (3 crs.)

Provides students with practical experience (200 hours each) in supervised direct service activities across all client systems from the individual's level to that of the community. This initial field experience allows the student to apply theory and skills acquired in the generalist foundation areas while simultaneously fostering the development of a professionally reflective, ethical, knowledgeable, and self-evaluating social worker. *Co-requisites: SWK 520 /SWK 521.*

SWK 531 - Field Practicum II (3 crs.)

Provides students with practical experience (200 hours each) in supervised direct service activities across all client systems from the individual's level to that of the community. This initial field experience allows the student to apply theory and skills acquired in the generalist foundation areas while simultaneously fostering the development of a professionally reflective, ethical, knowledgeable, and self-evaluating social worker. *Co-requisites: SWK 520 /SWK 521.*

SWK 601 - Integrative Seminar (3 crs.)

Builds upon the foundation content from students' B.S.W. programs. It serves as a "bridge" course to integrate B.S.W. learning in preparation for M.S.W. courses. A major focus in the course is an in-depth look at the history of social welfare services and the relationship to current social work knowledge, skills, and values. A volunteer experience is required that serves as the basis for

the course project. Primarily taught via distance learning with some meetings with the instructor. Offered in Summer. *Prerequisite: Advanced standing admission status.*

SWK 602 - Behavioral Health Care Settings (3 crs.)

Extends and elaborates the advanced generalist approach to social work practice to a special field of practice. Introduces the social worker's role in behavioral health care and the policy issues that impact on practice. Focuses on four content areas: 1) what the social worker's role is in adult and child behavioral health care settings; 2) historic and current policy that affect behavioral health care services; 3) current research in behavioral health care related issues and 4) international models of care. The special field is studied through the examination of curricular areas: human behavior, practice, policy, and services, research, and special populations. Designed to help prepare students for advanced generalist social work practice with client systems and social resource systems relating to mental or behavioral health. Social workers are frequently involved in the delivery of services to people and families troubled by mental disorder in settings designed to deal specifically with those problems, as well as in other practice areas such as corrections, schools, child welfare, and gerontology. *Prerequisite: SWK 601.*

SWK 603 - Gender Issues (3 crs.)

In-depth study of the concepts, policies, practices, and research in the field of gender studies. Examines institutionalized gender socialization, current gender issues and controversies, feminist theory for understanding behavior, and guiding principles and practices for helping professionals. Students encouraged to develop heightened self-awareness about their gender-related attitudes and values for functioning as a helping professional. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 604 - Health Care Settings (3 crs.)

Extends and elaborates the advanced generalist approach to social work practice to a special field of practice. Introduces the social worker's role in health care and the policy issues that impact on practice. Focuses on four content areas: 1) what the social worker's role is in various health care settings; 2) historic and current policy that affect health care services; 3) current research in various health care related issues, e.g. living wills and AIDS and 4) international models of care. The special field is studied through the examination of curricular areas: human behavior, practice, policy, and services, research, and special populations. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 605 - Child Welfare Settings (3 crs.)

In-depth study of the concepts, policies, practices, and research in the field of child welfare and family and children services. Provides an introduction to the child welfare field, an overview of the development of services for children, a detailed examination of the provision of services; and an exploration of the ethical implications of child welfare practice. Focuses on the spectrum of services designed to support, supplement, or substitute for the care traditionally given by biological parents, and explores the major issues confronting the practitioner today with implications for the future. Views family events within their ecological context and strives to create sensitivity to various family forms and orientations. In concert with the generalist perspective and program goals and objectives, students will have learning experiences designed to develop and integrate their knowledge, values, and skills essential for the attainment of advanced level competency in child welfare and family and children service. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 606 - School Settings (3 crs.)

Designed to provide an in-depth understanding of the field of social work practice within school settings. Covers policy, research, practice, and human behavior content within the field of schools through the exploration of broad content and the use of a variety of educational approaches. Examines the roles and functions of social workers within educational institutions, and provides students with opportunities for exploration of the application of social work values and ethics within a host setting. Issues of economic and social justice as well as diversity are also examined in the content of the educational systems of the United States. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 607 - Emergency Mental Health and Trauma (3 crs.)

In-depth study of the concepts, policies, practices, and research in crisis intervention during disasters. Provides introduction to the disaster field, a detailed examination of the human service delivery systems; and guidelines for attending to the emotional and mental health needs of both disaster survivors and responders, using the Critical Incident Stress Management model. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 608 - Program Management (3 crs.)

Designed to expand students' knowledge of and skills in effective program management of human services organizations and to provide approaches for managing service program effectively. Organizational and management theories and principles are applied to a range of human services. *Pre- or Co-requisites: SWK 601 or completion of Foundation year.*

SWK 609 - Introduction to Art Therapy (3 crs.)

Advanced elective course explores the principles and the techniques of art therapy and considers the usefulness of art therapy in providing alternatives and supplements to the customary verbal methods of intervention. Ways of working with clients at various stages of the life cycle, childhood through old age, and with clients who are on different levels of psychosocial functioning are examined. Issues in art therapy are explored both cognitively and experientially. Previous training in the visual arts and artistic ability are not required. *Prerequisite: SWK 601 or completion of Foundation year.*

SWK 610 - Advanced Human Behavior in the Social Environment (3 crs.)

The required HBSE course during the advanced year for all students will put emphasis on the application of material in the student's area of interest. Students will be encouraged to help develop their knowledge through a variety of reading, activities, and lecture. Additional material will focus on diversity and populations at risk, and social and economic justice. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing. *Prerequisite: SWK 511.*

SWK 611 - Children and Youth at Risk (3 crs.)

An in-depth study of the concepts, policies, practices and research in the field of child services including school social work and child welfare. In addition, this course will provide a detailed exploration and understanding of a range of at-risk children and youth populations and their families. This comprehensive understanding will assist practitioners to effectively conduct an assessment, develop a treatment plan listing evidence-based intervention strategies and/or prevention programs that will effectively meet the complex needs of at-risk populations and their families. The challenges and ethical dilemmas confronting social work

practitioners working with at-risk populations and their families will also be addressed. *Prerequisites: SWK 521 or SWK 601.*

SWK 612 - Social Work and the Law (3 crs.)

Social workers understand that virtually everything they do professionally in the 21st century has to include evaluations of risk, legality, funding, and unintended consequences. Malpractice appropriately receives much attention in this regard but legislative and regulatory requirements regarding funding, grants and contracts, definitions of disabilities, responsibilities of different levels of government and many other legal aspects of the profession must also be considered. Law, for most people, is a foreign language and social workers need to be somewhat fluent in this language so they can deal with the convergence of law and social work, social services, and social policy. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing. *Prerequisite or co-requisite: SWK 601.*

SWK 613 - Mediation in Social Work Practice (3 crs.)

Mediation as an alternate form of dispute resolution is continuing to rise and is being used in human services, corporate, labor, consumer, and family issues widely across the United States. Students in the mediation class will focus on practical and theoretical aspects of mediation and its place in the larger framework of alternate dispute resolution for social work clients. Skills in helping parties find common ground, creating a climate for reaching agreement, aspects of confidentiality, and both directive and non-directive mediation techniques will be explored. *Prerequisites: SWK 521 and SWK 601.*

SWK 615 - Advanced Social Welfare Policy (3 crs.)

Course introduces conceptual approaches to policy analysis and assesses selected social policies, programs, and services in the areas of income maintenance, health care, and personal social services in accordance with these approaches and with specific reference to their impact on special populations. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing. *Prerequisite: SWK 515 Social Welfare Policy.*

SWK 618 - Human Rights in Social Work (3 crs.)

This three credit advanced elective course includes the examination of the major human rights documents and their impact on social work practice as well as the exploration of strategies and techniques used in the rights-based approach in social work. This is a blended course that is primarily delivered online with some face-to-face interaction. *Co- or Prerequisites: SWK601: Integrative Seminar or completion of Foundation year.*

SWK 620 - Advanced Micro/Mezzo Social Work Practice (3 crs.)

Provides advanced knowledge, practice experience, and consultation in both a classroom setting and in collaboration with practice in the student's field placement, which focuses on individuals, families, and/or groups. The use of the supervisory model in agencies will be explored in depth. *Prerequisite: SWK 520; co-requisite: SWK 630.*

SWK 621 - Advanced Macro Social Work Practice (3 crs.)

Assists the student in developing knowledge of administration supervision, grant writing, fundraising, and budgeting. The macro social work practice course will provide models for developing programs that promote social and economic justice for the underserved, the poor, and the oppressed populations. This course will meet two-thirds in the classroom and one-third online. *Prerequisite: SWK 521; co-requisite: SWK 631.*

SWK 625 - Advanced Research Methods (3 crs.)

Focuses on social work practice research paradigms, models, and methods. Particular attention is given to the conduct of evaluation and assessments projects. Students will conduct independent evaluative research within their field placement settings. This course also gives the student a more in depth exploration of gender and ethnic minority research issues and computer-assisted, descriptive and exploratory data analysis. Approximately one-third of this class will include online content, one-third will be in person with the instructor, and one-third will be via video conferencing.

Prerequisite: SWK 525 Research Methods.

SWK 630 - Advanced Field Practicum I (5 crs.)

Students complete 250 hours of supervised agency/organization practice experience during the first semester of the second year. Students will be in the field three days per week. The same course requirements and hourly expectation will be in place for Advance Field Practicum II in the second semester of the second year.

Prerequisite: SWK 530/531 or Advanced Standing Status; co-requisite: SWK 620 or SWK 621

SWK 631 - Advanced Field Practicum II (4 crs.)

Students complete 250 hours of supervised agency/organization practice experience during the first semester of the second year. Students will be in the field three days per week. The same course requirements and hourly expectation will be in place for Advance Field Practicum II in the second semester of the second year.

Prerequisite: SWK 530/531 or Advanced Standing Status; co-requisite: SWK 620 or SWK 621.

SWK 640 - Selected Topics in Social Work (3 crs.)

Provides the opportunity for a range of topics to explore issues and concerns for the social work profession. Designed for advanced graduate students. *Prerequisite: SWK 601 or completion of Foundation year.*

TCH - Teacher Education**TCH 423 - Integrating Literature in Middle Grades (3 crs.)**

Focuses on broadening knowledge base and understanding of children's/young adults' literature available for use with students in content area study. Literature discussed with exploration of incorporating it into middle level content subjects and using it as a tool to enhance literacy and content learning.

TCH 445 - Strategies for Effective Classroom Management (3 crs.)

Presents historical perspective of past practices in classroom management strategies, including discipline techniques. Relates current school law to what is legal for teachers in managing classrooms. Surveys current theories and programs regarding classroom and time management strategies. Provides practical suggestions based upon research findings as to how to more effectively and efficiently develop a proactive environment conducive to instruction. Explores multicultural settings and inclusion dynamics as they relate to classroom management strategies.

TCH 490 - Selected Topics in Teacher Education (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

TCH 501 - Effective Teaching: Theory and Practice (3 crs.)

Emphasis on assisting teachers to understand and utilize the research and data-based principles of effective teaching. Included are planning and management techniques that enable effective teachers to make efficient use of class time while preventing

discipline problems. Theories and practical applications of various discipline models, creative teaching techniques, and self-assessment devices presented.

TCH 502 - Strategies for Critical Thinking and Problem-Solving (3 crs.)

Offers both a research base and real-world classroom applications for infusing critical thinking and problem solving into all levels of curricular areas. Encourages participants to create learning environments fostering intellectual curiosity and inventiveness. Explores strategies that challenge students to pose problems and search for ways to solve them. Incorporates performance-based assessment.

TCH 505 - Instructional Technology for Today's Educator (3 crs.)

Students develop skills in using current technologies to support instruction in a variety of settings. Multimedia software, web page development, and distance learning design and implementation are required. Students examine various aspects of interactive and noninteractive technologies and make instructional applications. Evaluating appropriate hardware and software configurations for delivering instruction is included. Students will use technology to research and develop real life classroom curricular solutions.

TCH 511 - Elementary School Curriculum and Assessment (3 crs.)

Surveys existing elementary school programs and research to determine and evaluate curricular models and assessment issues. Investigates such areas as purposes of education, curricular content, scope and sequence, classroom climate, standards, and program evaluation.

TCH 524 - Middle School Curriculum and Assessment (3 crs.)

Surveys basic characteristics of middle school organizational patterns, curriculum design, and evaluation models. Evaluates student development, instructional strategies, and assessment issues. Reviews these areas based on current research.

TCH 542 - Modern Elementary School Mathematics (3 crs.)

Deals with the structure of mathematics: reasoning, sets, numeration systems, operations, and their properties and number sentences (equalities and inequalities). Discovery learning of the mathematics is emphasized. *Prerequisite: Undergraduate course in teaching of mathematics or permission of the instructor.*

TCH 546 - Teaching Science in the Elementary School (3 crs.)

Explores a variety of strategies and techniques for effective N-8 science teaching. An understanding of related science principles is interwoven with practical applications for the classroom. Science curriculum construction, and analysis is an emphasis. Science, technological, and societal connections are considered. *Prerequisite: Undergraduate course in elementary science methods or permission of the instructor.*

TCH 560 - Making Social Studies Dynamic (3 crs.)

Eliminates the "bore" and "gore" from social studies by studying the impact of dynamic forces on the technological age of information. Explores the arena for modern media literacy. Examines social forces, controversial issues, current events, cooperative learning, conflict resolution, and pragmatic research findings about the social studies. Investigates how to make the classroom teacher's social studies more relevant and meaningful. *Prerequisite: An undergraduate course in teaching of social studies or permission of the instructor.*

TCH 575 - Advanced Child Development (3 crs.)

Stresses the results of scientific studies that are used to examine cognitive, physical, and social processes in child development from

birth to pre-adolescence with an emphasis placed on the early years. Influence of child's environment, home, and school explored.

TCH 594 - Selected Topics in Teacher Education (1-3 crs.)

Opportunity to offer courses in areas of departmental major interest not covered by the regular courses.

TCH 599 - Independent Study (3 crs.)

Opportunity for student to pursue in-depth study on a topic or issue of personal interest under the direction and guidance of a department faculty member.

TCH 600 - Elements of Research (3 crs.)

Includes a study of the nature and types of research, the selection of appropriate research topics, research techniques including simple statistics, the use of the library resources in research and the systematic collection, evaluation, and presentation of research data. Students are guided in developing an action research project in the area of elementary education. Students who have departmental approval and are enrolled in TCH 612 and/or TCH 613, Thesis, may use the course to assist them in preparing a research proposal. TCH 600 must be completed within the first 15 credits leading to a master's degree.

TCH 609 - Action Research (3 crs.)

Designed for graduate students to engage in supervised professional activities in selected early childhood, elementary, middle school, or secondary education placements.

TCH 612 - Thesis I (3 crs.)

TCH 613 - Thesis II (3 crs.)

TCH 620 - Curricular Decision Planning: Standards, Assessment, and Accountability (3 crs.)

Examines the different attributes, best practices, approaches, and resources for curricular design, improvement, decision making, as well as utilization of data for classroom and school wide instruction and accountability. Pennsylvania's Standards Aligned System (SAS), Common Core Standards, Alternative Academic Standards, and other state and national guiding documents will be used as the basis for investigating how curricular planning, assessment, accountability, and student learning performance are interconnected. In addition to foundational research in curriculum, students will also utilize the SAS portal to focus on integrating the components of Standards, Assessments, Curriculum Framework, Instruction, Materials and Resources, and Safe and Supportive Schools. This course meets the requirements for conversion to Level II Certification.

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 Todd V. Peterson, M.D., Director, University Health and Emergency Services
 Crissy E. Diehl, Clerk Typist
 Joyce J. Bright, M.S., Medical Tech.
 Adrienne L. Miller, R.N., Nurse Supervisor
 Donna J. Forney, R.N., Registered Nurse
 Kathleen G. Jengeleski, R.N., Registered Nurse
 Deborah C. Lee, R.N., Registered Nurse
 Kathleen Rundquist, Registered Nurse
 Mary D. Shirley, R.N., Registered Nurse
 Barbara H. Summers, R.N., Registered Nurse
 Margaret Horn, R.N., Registered Nurse
 Kimberly Spitler, R.N., Registered Nurse
 Janice M. Bye, United Campus Minister
 Roxanne M. Dennis, Catholic Campus Minister (Vacant), Catholic Campus Minister
 Nick Iula, Director, Campus Dining Services
 Abbey Brotzman, Campus Director of Marketing
 Jodi Conrad, Director of Catering
 Cindy Emondi, Manager of Century Café
 Tony Emondi, Catering Executive Chief
 Trish Gamble, Starbucks Manager
 John Gaughan, Director of Operations
 Brooke Hall, Marketing Director for Dining Services
 Michael Haus, Campus Executive Chef
 Robert Kougher, Director of Kriner Dining Hall
 Brenda E. Kunkleman, Director of Retail Operations
 Matthew Mosley, Campus Dining Controller
 Gregg Thuemmel, Director of Reisner Dining Hall
 Natasha Zettlemoyer, Senior Supervisor of Reisner Dining Hall
 Jeffrey A. Michaels, M.S., Director of Athletics
 Carrie A. Michaels, M.S., Associate Director of Athletics/SWA
 Ashley J. Grimm, M.B.A., Assistant Director of Athletics
 Tammy A. Swope, Secretary
 Wesley R. Mallicone, M.S., A.T.C., Director, Sports Medicine
 Rebecca S. Fitz, M.S., A.T.C., Associate Director, Sports Medicine
 Miranda S. Fisher, B.S., Assistant Director, Sports Medicine

Tanya L. Miller, M.S., LAT, ATC, NASM-PES, Assistant Director, Sports Medicine
 Galen E. Piper, B.S., Director, Intramurals/Recreation and Coordinator of Facilities/Club Sports
 Melissa P. Hazzard, Assistant Director, Recreation

Coaches

Matthew S. Jones, B.S., Baseball
 Adam P. Sheibley, B.A., Assistant Baseball
 R. Christopher Fite, B.A., Men's Basketball
 Eric D. Rahauser, M.S., Assistant Men's Basketball
 Kristin K. Trn, B.S., Women's Basketball
 Jennifer L. Grassel, M.S., Assistant Women's Basketball
 Heather Armstrong-Shughart, B.S.B.A., Cheerleading Advisor
 Steven A. Spence, B.S., Cross Country/Assistant Track and Field
 David M. Osanitsch, B.S., Track and Field/Assistant Cross Country
 Kurt A. Dunkel, M.S., Assistant Track and Field
 Douglas J. Knol, M.S., Assistant Track and Field
 Bertie L. Landes, B.S., Field Hockey
 Mark S. Maciejewski, M.S., Football
 Janine F. Olah, Secretary
 Michael C. Burket, M.E., Assistant Football
 Joseph H. Davis, M.A., Assistant Football
 Peter J. Lee, B.S., Assistant Football
 James C. Morgan, B.S., Assistant Football
 Ashley D. Manion, Lacrosse
 Jeremy J. Spering, M.S., Men's Soccer/Assistant Women's Soccer
 Rob W. Fulton, M.Ed., Women's Soccer/Assistant Men's Soccer
 Robert G. Brookens, Softball
 Ronald DeShong, Assistant Softball
 Timothy P. Verge, M.Ed., Men's and Women's Swimming
 Amanda E. Fenn, M.S., Women's Tennis
 Leanne R. Piscotty, B.S., Women's Volleyball
 Abigail Leonard, B.S., Assistant Volleyball
 Seth W. Bloomquist, M.S., Wrestling
 Ollie Cooperwood, Assistant Wrestling
 Cindy E. Hosfelt, Stock Clerk
 Brendan A. Laughlin, Stock Clerk
 William E. Varner, Stock Clerk
 Darrell J. Claiborne, M.Ed., Director, University Union and Student Activities (CUB)
 Marsha S. Bonn, M.A., Associate Director for University Union Operations
 Elizabeth C. Pursawni, M.S., Assistant Director for Campus Activities and Programming
 Ashley L. White, M.A., M.S., Assistant Director for Student Group Services and Leadership Development
 Bryan A. Hess, M.M., Technical and Event Services Manager
 Judy L. Newell, Information and Cora I. Grove Spiritual Center Coordinator
 Connie S. Gruver, Administrative Assistant
 Darrell L. Miller, M.B.A., SU Student Services, Inc., President/Fiscal Officer
 Franklin T. Klink III, Accountant/Contract-Administrator
 Mark F. Luther, MIS Manager
 Dena R. Baer, Accounts Payable/Office Supervisor
 Cindy L. Fraker, Payroll /Accounting Clerk
 Deanna P. Statler, B.S.B.A., Accounting Clerk

Lisa J. Laughlin, Student Services Inc., Senate Secretary
 Sarah J. Kraus, Manager, University Store
 Mark R. Barnes, Assistant Store Manager
 Nancy M. Carroll, Textbook Department Manager
 Charles R. Yocum, Jr., Assistant Manager/Merchandise
 Manager
 Susan J. Grove, Clerk, Web Orders
 Alison M. Martin, B.S., Text Book Manager
 Charles L. Kunkleman, Shipping/Receiving Lead

Administration and Finance

Denny Eakle Terrell, Ph.D., Vice President for Administration
 and Finance
 Heidi R. Clark, Executive Assistant to Vice President
 Melinda D. Fawks, B.S., Associate Vice President,
 Administration and Finance
 Sandra J. Corman, M.S., Clerk Stenographer
 Deborah K. Martin, Director, Purchasing and Contracting
 Mona M. Holtry, Assistant Director
 J. Gwyn McCleary, Purchasing Agent
 Marnie L. LaBonte, B.S., Purchasing Agent
 (Vacant), Purchasing Agent
 Dawn M. Cutshall, B.S.B.A., Bursar
 Merisa L. Harbaugh, B.S.B.A., Assistant Bursar
 Joseph A. Kopchick, CPA, B.S.B.A., Accountant
 Patricia A. Coldsmith, Fiscal Assistant
 Loni R. Myers, Fiscal Assistant
 Georgia H. Taylor, Fiscal Assistant
 Brenda K. Wingert, A.A. Fiscal Assistant
 (Vacant), Fiscal Assistant
 Margaret J. Thompson, CPA, M.S., Director, Accounting
 Mark Paul, B.S.B.A., Assistant Director
 (Vacant), Fiscal Assistant
 John R. Jones, B.S.B.A., Grant Accounting Manager
 Deborah R. Mowers, A.A., Fiscal Assistant
 Robert E. Witter, B.S.B.A., Administrative Services Manager
 Denise E. Davidson, Clerk Typist
 Carmen L. O'Donnell, Clerk Typist
 Dennis L. Starliper, Clerical Supervisor
 Ryan M. Bonafair, Clerk
 Michael D. Craig, B.S., Clerk
 Richard L. Horst, Clerk
 Wendy S. Stoops, Clerk
 David A. Topper, Ed.D., SPHR, Associate Vice President,
 Human Resources
 Robyn L. Lovett, Human Resources Representative
 Lisa L. Ronan, M.S., SPHR, Assistant Director, Human
 Resources for Employment and Classification
 Maryrose Wilson, M.S., Benefits and Employee Services
 Manager
 Mary Jane Diffenbacher, Payroll and HRIS Manager
 Nipa Browder, M.S., Staff Development Manager/HR
 Generalist
 Belinda B. Johnson, B.S.B.A., Payroll Representative
 Cytha D. Grissom, M.S., Director, Public Safety/Chief of Police
 Thomas P. Rumberger, M.S., Assistant Director,
 Police/Investigator
 David F. Wozniak, M.S., Safety Coordinator
 David E. Myers, Safety Clerk
 Scott M. Bradnick, SGT Supvy
 Bryan L. Ruth, B.S., SGT Supvy
 Patrick A. Taylor, A.A., SGT Supvy
 Stephanie A. Berger, Patrol Officer
 Heather L. Bradnick, Patrol Officer

Michael J. Brennan Jr., Patrol Officer
 Julie M. Clark, A.A., Patrol Officer
 Shawn G. Fraker, Patrol Officer
 Matthew W. Hopkins, B.S., Patrol Officer
 Daniel E. Johns, Patrol Officer
 Leonard J. Lovejoy, A.A., Patrol Officer
 Karl A. Schucholz, Patrol Officer
 Geoffrey T. Smith, A.A., Patrol Officer
 Robert C. Wenerd, Patrol Officer
 Jeannette A. Chamberlain, Clerk Typist
 J. Lance Bryson, M.S., PE, Associate Vice President, Facilities
 Management and Planning
 William B. Lensie, B.S., Associate Director, Maintenance
 and Operations
 Terry L. Starr, B.S., PE, Associate Director, Planning,
 Design and Construction
 Bruce E. Herring, M.S., Assistant Director, Planning and
 Engineering
 Eric B. Barr, Assistant Director, Construction Management
 (Vacant), Facilities Resources Manager
 Ann M. Kochenour, A.S., Architectural Designer
 Angela M. Wingert, Clerk Typist
 Rosemary M. Kusko, B.S.Ed., Clerk Stenographer
 Justin R. Elbel, TMA Administrator
 Matthew D. Shank, Automotive Mechanic Supervisor
 Timothy L. Hull, Automotive Mechanic
 C. William Jumper, Maintenance Foreman Carpentry
 Daniel P. Geyer, Carpenter
 Ricky E. Group, Maintenance Repair
 Shawn W. Martin, Maintenance Repair
 Daniel K. Timmons, Maintenance Repair
 Gary S. Harglerode, Locksmith
 Roger S. Woltz, Locksmith
 Robert J. Koch, Custodial Services Manager
 Reginald G. Lindsey, Semi-Skilled Laborer
 (Vacant), Semi-Skilled Laborer
 Greg C. Rhone, Labor Foreman
 Chester J. Jumper, Equipment Operator
 Curtis L. Miller, Equipment Operator
 (Vacant), Assistant Director, Energy Management
 John R. Tritt, Controls Management Technician
 Garry E. Wall, Controls Management Technician
 Ricky L. Hosfelt, Utility Plant Supervisor
 George M. Natoli Jr., Utility Plant Operator
 Duite E. Ricker, Utility Plant Operator
 Shawn L. Rosenberry, Utility Plant Operator
 Randy R. Russell, Utility Plant Operator
 Chad W. Stevenson, Utility Plant Operator
 Gerald L. Swanger, Utility Plant Operator
 Steven A. Trayer, Utility Plant Operator
 Stephen J. Walters, Utility Plant Operator
 Richard L. Bittinger, Utility Plant Helper
 Larry P. Rotz, Utility Plant Helper
 Jeryl S. George, Grounds Manager
 John O. Gossert, Groundskeeper Supervisor
 Jeanne M. Yohe, Groundskeeper Supervisor
 Michael Frey, Groundskeeper
 (Vacant), Groundskeeper
 (Vacant), Groundskeeper
 (Vacant), Groundskeeper
 Terry L. Dunlap, Equipment Operator
 Joel L. Hosfelt, Equipment Operator
 Bryan K. Kyner, Equipment Operator

Darrell E. McKenrick, Equipment Operator
 Gregg W. Naylor, Equipment Operator
 Lonnie E. Shaffer, Equipment Operator
 Kevin L. Oakes, Maintenance Foreman, Electrical/Electronics
 Art E. Crull, Electrician
 Wayne E. Hershey, Jr., Electrician
 Dustin L. Koser, Electrician
 Brian J. Cordell, Electronics Technician
 Robert C. Martin, Jr., Maintenance Foreman,
 Painting/Carpentry Repair
 Paul W. Besecker, Painter
 Thomas A. Weaver, Painter
 Roy E. Wiser, Painter
 Arthur E. Martin, Carpenter
 Rodger L. Yohe, Carpenter
 Paul E. Gutshall Jr., Maintenance Foreman, Mechanical Systems
 Kayedon M. O'Neal, Refrigeration Mechanic
 Roy F. Ryder, Plumber
 Scott E. Stoops, Refrigeration Mechanic
 Dominic Barbagallo, Maintenance Repair

Building Services

Matthew D. Varner, Maintenance Foreman, E and G Zone
 Ralph D. Alleman, Maintenance Repair
 Thomas A. Graham III, Maintenance Repair
 Scott T. Moyer, Maintenance Repair
 Curtis P. Oakes, Maintenance Repair
 Ronald J. Shindledecker, Maintenance Repair
 Douglas E. Stepler, Electrician
 Justin R. Strickler, Maintenance Repair
 Rex A. Henry, Maintenance Foreman, Auxiliaries Zone
 Robert D. Shoop, Maintenance Repair
 Stephen J. Walters, Maintenance Repair
 Timothy L. Wingert, Maintenance Repair
 (Vacant), Maintenance Repair
 Adam J. Runshaw, Custodial Work Supervisor, Day Shift
 Cindy A. Geyer, Custodial Work Supervisor, Second Night
 Richard E. Foster, Custodial Work Supervisor, Night Shift
 Paul Aaron, Custodial Worker
 Joanne E. Bard, Custodial Worker
 Christina M. Barrick, Custodial Worker
 Troy Bigler, Custodial Worker
 William L. Bittinger, Custodial Worker
 Jeffrey L. Callan, Custodial Worker
 Karen L. Carey, Custodial Worker
 Steven D. Carroll Jr., Custodial Worker
 Judy A. Cassner, Custodial Worker
 Donald Diehl, Custodial Worker
 Andrew J. Fasnacht, Custodial Worker
 Tonia L. Fasnacht, Custodial Worker
 Paul R. Gabert, Custodial Worker
 Tonya Green, Custodial Worker
 Lawrence D. Gutshall, Custodial Worker
 Brian C. Hancock, Custodial Worker
 Paula D. Hancock, Custodial Worker
 David E. Harris, Custodial Worker
 Susan C. Harris, Custodial Worker
 Carol L. Hepfer, Custodial Worker
 Barbara E. Hofe, Custodial Worker
 Donn A. Keck, Custodial Worker
 Ray E. Keefer, Custodial Worker
 Rocky L. Kelly, Custodial Worker
 Gail Kunkleman, Custodial Worker
 Kelly J. Kunkleman, Custodial Worker

Sharon K. Liberator, Custodial Worker
 Readith K. Lindsey, Custodial Worker
 Brenda Lockhart, Custodial Worker
 Donna L. Loy, Custodial Worker
 Evelyn A. Melius, Custodial Worker
 Karen M. Miley, Custodial Worker
 Donna J. Miller, Custodial Worker
 Thomas M. Myers, Custodial Worker
 Tiffany Nay, Custodial Worker
 Diane Osbaugh, Custodial Worker
 Thomas M. Provins, Custodial Worker
 Truman M. Randolph, Custodial Worker
 Vivian L. Riley, Custodial Worker
 Laurie J. Shrawder, Custodial Worker
 Penny Smith, Custodial Worker
 Gary D. Spencer, Custodial Worker
 John J. Spencer, Custodial Worker
 JoAnn Sprecher, Custodial Worker
 Dale S. Stambaugh, Custodial Worker
 Debra D. Stine, Custodial Worker
 Lori A. Stine, Custodial Worker
 Samuel Vazquez, Custodial Worker
 Dottie L. Werner, Custodial Worker
 Joanne Willis, Custodial Worker
 Lloyd Willis, Custodial Worker

Shippensburg University Foundation

John E. Clinton, M.A.Ed., President and CEO
 Anne M. Detter, B.F.A., M.B.A., Director of Marketing
 Patti F. Savoulidis, B.A., Coordinator, Stewardship and
 Event Planning
 Edna Fenton, Special Projects Assistant
 Kit S. Rossmann, B.A., Director, Development
 Abigail Glock, B.S., Associate Director, Annual Fund
 Jose R. Nunez, Assistant Annual Fund Director/Phonathon
 Coordinator
 Sandra R. Jones, B.A., Secretary to Development
 Lani Longarzo, M.B.A., Director, Major Gifts
 Linda L. Miller, M.Ed., Senior Major Gifts Officer
 Kevin S. Bender, B.A., Director, Research
 Scott D. Lux, B.A., Major Gifts Officer
 Cindy L. Yeiser, B.S.B.A., Major Gifts Officer
 Jacqueline L. Stone, A.A., Senior Major Gifts Administrative
 Assistant
 Carol H. Rose, Major Gifts Secretary
 Chrystal K. Miracle, M.B.A., C.P.A., Director, Finance and
 Administration and CFO
 Matthew F. Cabbage, B.S., Network Administrator
 Rhonda K. Horst, M.B.A., C.P.A., Controller
 Diane L. Wenger, A.A., Coordinator, Gift
 Recording/Records and Office Manager
 Michelle E. Perkins, Coordinator, Student Housing
 Samuel E. Wiser, Sr., Maintenance Supervisor
 Virginia I. Shew, Assistant Maintenance Supervisor
 Stephanie L. McCullough, M.Ed., Bartos Child and Family
 Center Program Director
 Nicholas D. Brewer, B.S.Ed., Assistant Preschool/School
 Age Teacher
 Kristi N. Hershey, B.S.Ed., Assistant Director/Lead
 Preschool Teacher
 Mary Malinda Mansfield, BA, Assistant Toddler Teacher
 Kimberly M. Miller, B.S.Ed., Lead Toddler Teacher
 Erin L. Rotz, M.Ed., Lead Preschool Teacher
 Lisa M. Taylor, B.S.Ed., Assistant Preschool Teacher

Department Offices

Department	Location	Extension
Accounting, Management Information Systems, and ITBE	Grove Hall 328	1436
Art and Design	Huber Art Center 210	1530
Biology	Franklin Science Center 142	1401
Chemistry	Franklin Science Center 327	1629
Communication/Journalism	Rowland Hall 108	1521
Computer Science and Engineering	Mathematics and Computing Technologies Center 156	1178
Counseling and College Student Personnel	Shippen Hall 123	1668
Criminal Justice	Shippen Hall 321	1558
Economics	Grove Hall 324	1437
Educational Leadership and Special Education	Shippen Hall 127	1591
English	Dauphin Humanities Center 113	1495
Finance, Supply Chain Management	Grove Hall 228	1434
Geography/Earth Science	Shearer Hall 104	1685
Exercise Science	Henderson 109	1721
History/Philosophy	Dauphin Humanities Center 213	1621
Human Communication Studies	Dauphin Humanities Center 313	1732
Management/Marketing	Grove Hall 224	1439
Mathematics	Mathematics and Computing Technology Center 250	1431
Military Science	Wright Hall 206	1782
Modern Languages	Rowland Hall 109	1635
Music/Theatre Arts	Performing Arts Center 220	1638
Physics	Franklin Science Center 123	1570
Political Science	Grove Hall 424	1718
Psychology	Franklin Science Center 114	1657
Social Work/Gerontology	Shippen Hall 335	1717
Sociology/Anthropology	Grove Hall 428	1735
Teacher Education	Shippen Hall 214	1688

Office hours are 8:00 a.m.- noon; 1:00-4:30 p.m. From off campus, dial (717) 477-extension.

FACULTY AND ADMINISTRATION

As of July 2014

University Administration

GEORGE F. (JODY) HARPSTER, *Interim President* (1995)
B.S., University of North Dakota; M.S. and Ph.D., University of Nebraska-Lincoln

VACANT, *Executive Vice President for External Affairs and University Relations*

LESLIE FOLMER CLINTON, *Associate Vice President for External Affairs and Director of the H. Ric Lubrs Performing Arts Center* (2003)
B.S., Shippensburg University; M.P.A., American University; Ed.D., Duquesne University

BARBARA G. LYMAN, *Provost and Senior Vice President for Academic Affairs* (2008)
B.A., Anna Maria College; M.A., Brandeis University; Ph.D., Louisiana State University; C.A.S. Harvard Graduate School of Education

TRACY A. SCHOOLCRAFT, *Associate Provost and Dean of Graduate Studies* (1993)
B.S., George Washington University; Ph.D., Pennsylvania State University

WILLIAM E. SOMMERS, *Associate Vice President for Enrollment Management* (2013)
B.A., Ripon College; M.S., Cardinal Stritch University

CHRISTINA M. SAX, *Associate Provost and Dean of Academic Outreach and Innovation* (2007)
B.S., University of Rochester; Ph.D., Medical College of Virginia

CAROLYN M. CALLAGHAN, *Associate Dean, Office of Professional, Continuing and Distance Education* (2005)
B.S., M.S.Ed. Illinois State University; D.Ed., Pennsylvania State University

SARAH E. STOKELY, *Dean of Academic Engagement and Student Support* (2012)
B.A., M.A., Ph.D., University of Maryland

DAVID I. HENRIQUES, *Associate Dean, School of Academic Programs & Services* (2001)
B.A., M.S., Millersville University; M.Ed., Ed.D., Widener University

JAMES H. MIKE, *Dean of the College of Arts and Sciences* (2006)
B.S., M.S., Youngstown State University; Ph.D., University of Cincinnati

JAMES A. DELLE, *Associate Dean of the College of Arts and Sciences* (2014)
B.A., College of the Holy Cross; M.A., College of William and Mary; Ph.D., University of Massachusetts

JAMES R. JOHNSON, *Dean of the College of Education and Human Services* (2008)
A.B., Duke University; M.S., Ph.D., Pennsylvania State University

NELLIE M. CYR, *Associate Dean of the College of Education and Human Services* (2011)
B.S., Edinboro University; M.S., Slippery Rock University; Ph.D., University of Pittsburgh

JOHN G. KOOTI, *Dean of the John L. Grove College of Business* (2010)
B.S., Jundi-Shapour University, Iran; M.S., Ph.D. Michigan State University

ANTHONY S. WINTER, *Associate Dean of the John L. Grove College of Business* (1979)
B.S., Shippensburg University; M.B.A., Arizona State University; D.Ed., Pennsylvania State University

RICK E. RUTH, *Vice President for Information Technologies and Services* (1982)
B.S., M.S., Ph.D., Ohio University

DENNIS H. MATHES, *Associate Vice President, Technology and Library Services and Dean of Library and Academic Technology Support Services* (1983)
B.S., M.S., Shippensburg University; Ed.D., Duquesne University

MICHELLE T. FOREMAN, *Associate Dean and Director of Library Services* (2007)
B.A., Wilson College; M.S., Wilkes University; M.L.I.S., University of Pittsburgh; Ph.D., Capella University

ROGER L. SERR, *Vice President for Student Affairs* (1994)
B.A., Northern State University; M.S., Western Illinois University; Ph.D., Michigan State University

DAVID L. LOVETT, *Associate Vice President for Student Affairs and Acting Dean of Students* (1984)
B.S.Ed., M.S., Shippensburg University; Ed.D., University of Virginia

DENNY EAKLE TERRELL, Ph.D., *Vice President for Administration and Finance* (2008)
B.S., M.S., Baylor University; Ph.D., University of Texas at Austin

DAVID A. TOPPER, *Associate Vice President for Administration and Finance* (1995)
B.A., Pennsylvania State University; M.A., Saint Francis University; Ed.D., Duquesne University

MELINDA D. FAWKS, *Associate Vice President for Administration and Finance* (1992)
B.S., Pennsylvania State University

LANCE BRYSON, P.E., *Associate Vice President for Facilities* (1997)
B.S., U.S. Coast Guard Academy; B.S. and M.S., University of Illinois; M.S., University of Alaska

Faculty Members

ABDULMAJEED M. ABDURRAHMAN, *Associate Professor of Physics* (2002)

B.S., University of Tennessee; M.A., University of Mississippi; Ph.D., University of Oxford-United Kingdom

LEA T. ADAMS, *Associate Professor of Psychology* (2006)

B.S., Central Missouri State University; M.A., California State University; Ph.D. Vanderbilt University

KWABENA AKURANG-PARRY, *Associate Professor of History/Philosophy* (2000)

B.A., University of Science and Technology-Kumasi; M.A., Wilfred Laurier University; Ph.D. and Post-Graduate Diploma, York University-Toronto

STEPHANIE N. ANDERSON, *Assistant Professor of Communication/Journalism* (2007)

B.A., University of Pittsburgh; M.F.A., Pennsylvania State University

MICHAEL T. APPLGARTH, *Associate Professor of Geography/Earth Science* (2001)

B.S., Northern Arizona University-Flagstaff; M.A., University of Northern Iowa-Cedar Falls; Ph.D., Arizona State University-Tempe

GEORGE B. ARMEN, *Assistant Professor of Physics* (2009)

B.S., Oregon State University; M.S. and Ph.D., University of Oregon

ALICE J. ARMSTRONG, *Associate Professor of Computer Science* (2008)

B.S., M.S. and D.Sc., George Washington University

ALLEN J. ARMSTRONG, *Professor of Physics* (1994)

B.S., Montana State University; M.S. and Ph.D., University of Colorado

MARCIE L. BAER-LEHMAN, *Professor of Biology* (2000)

B.S., Loyola College; Ph.D., University of Maryland

ANGELA E. BAGUÉS, *Associate Professor of Modern Languages* (1996)

B.A., Universidad Central de Barcelona; M.A., School for International Training; Ph.D., Rutgers University

APRIL E. BAILEY, *Associate Professor of Accounting and Management Information Systems* (2006)

B.S. and M.B.A., Shippensburg University

DINA BANERJEE, *Assistant Professor in Sociology/Anthropology* (2011)

B.A., and M.A., University of Calcutta; M.A., Bombay University; M.S., and Ph.D., Purdue University

JULIE BAO, *Professor of Teacher Education* (1992)

B.A. and M.A., East China Normal University; Ph.D., University of Nebraska

ANGELA M. BARTOLI, *Professor of Psychology* (1979)

B.S., M.S. and Ph.D., Pennsylvania State University

HAMID BASTIN, *Professor of Economics* (1989)

B.S. and B.B.A., Georgia Southern College; Ph.D., Georgia State University

DAVID F. BATEMAN, *Professor of Educational Leadership and Special Education* (1995)

B.A., University of Virginia; M.Ed., William & Mary; Ph.D., University of Kansas

LYNN F. BAYNUM, *Associate Professor of Teacher Education* (2002)

B.S., East Stroudsburg University; M.S., University of Scranton, Ph.D., Marywood University

WILLIAM E. BEALING JR., *Professor of Accounting and Management Information Systems* (2012)

B.S.B.A., Shippensburg University, M.B.A., University of Montana; Ph.D., Pennsylvania State University

JOSEPH B. BECK, *Associate Professor of Management/Marketing* (2010)

B.A., University of California, Berkeley; M.B.A., University of Oregon; Ph.D., University of California, Irvine

WENDY S. BECKER, *Associate Professor of Management/Marketing* (2008)

B.A., M.S. and Ph.D., Pennsylvania State University

SAMUEL BENBOW, *Assistant Professor of Social Work/Gerontology* (1999)

B.S. and M.S., Shippensburg University; Ph.D., Indiana University of Pennsylvania

CHAD H. BENNETT, *Assistant Professor of Academic Success Program* (2008)

B.A. and M.S., Shippensburg University; Ed.D., Duquesne University

JAMES E. BENTON, *Associate Professor of Accounting and Management Information Systems* (2010)

B.S., Northern Illinois University; M.A. and Ph.D., Old Dominion University; M.S., M.T. and J.D., Georgia State University

SHERRI E. BERGSTEN, *Associate Professor of Biology* (2005)

B.S., Haverford College; Ph.D., Princeton University

CORRINE E. BERTRAM, *Assistant Professor of Psychology* (2009)

B.A., University of Northern Iowa; M.A., Hunter College; Ph.D. The Graduate Center of the City University of New York

CURTIS R. BERRY, *Professor of Political Science* (1988)

B.S. and M.S., Shippensburg University; Ph.D., Syracuse University

MICHAEL W. BIBBY, *Professor of English* (1993)

B.A., Ohio State University; M.A. and Ph.D., University of Minnesota

JEFFREY T. BITZER, *Associate Professor of Communication/Journalism* (1983)

B.S., University of Maryland; J.D., Dickinson School of Law

REBECCA A. BLAHUS, *Assistant Professor of Teacher Education* (2010)

B.S. and M.Ed., Indiana University of Pennsylvania

WILLIAM L. BLEWETT, *Professor of Geography/Earth Science* (1992)

B.S., Northern Michigan University; M.A., Western Illinois University; Ph.D., Michigan State University

- JOHN D. BLOOM, *Associate Professor of History/Philosophy* (2006)
B.A. and M.A., University of California; Ph.D., University of Minnesota
- DALE L. BLUMAN, *Professor of Human Communication Studies* (1977)
B.S., M.A. and Ph.D., Pennsylvania State University
- JOSEPH BORRELL, *Associate Professor of Communication/Journalism* (2001)
B.S., Georgian Institute of Technology; M.A. and Ph.D., University of Pennsylvania, Annenberg School for Communication
- CYNTHIA A. BOTTERON, *Professor of Political Science* (2002)
B.A., University of New Mexico; M.A., Colorado State University; Ph.D., University of Texas at Austin
- DARA P. BOURASSA, *Associate Professor of Social Work/Gerontology* (2006)
B.A., and M.S.W., University of Pittsburgh; Ph.D., University of Maryland-Baltimore
- C. NIELSEN BRASHER, *Professor of Political Science* (1995)
B.A. and M.A., University of Colorado; Ph.D., American University
- MICHELE P. BRATINA, *Assistant Professor of Criminal Justice* (2013)
B.S., Pennsylvania State University; M.A., University of Arkansas; Ph.D., Indiana University of Pennsylvania
- WILLIAM A. BRAUN, *Assistant Professor of Exercise Science* (2004)
B.A., Indiana University; M.S., Texas Christian University; Ph.D., University of Toledo
- THOMAS H. BRIGGS, *Associate Professor of Computer Science* (2002)
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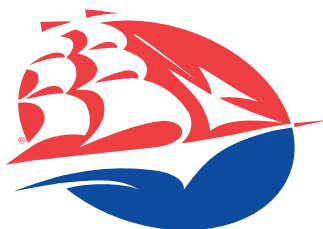
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